

# FINAL EXAMINATIONS



- ⊙ Model Examinations of the School Book  
(2 models + model for the special needs students)
- ⊙ 20 Examinations from Some Governorates for the Year 2020
- ⊙ 25 Examinations from Some Governorates for the Year 2017
- ⊙ 5 Examinations from Some Governorates for the Year 2016



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## Model Examinations of the School Book

## Model

1

Answer the following questions :

1 Complete the following statements :

(1)  $1.5 \text{ litre} + 0.5 \text{ dm}^3 + 500 \text{ cm}^3 = \dots\dots\dots$  litres.

(2) The volume of a cuboid is  $64 \text{ cm}^3$  and the area of its base is  $16 \text{ cm}^2$  , then its height =  $\dots\dots\dots$  cm.(3) If the real length of an insect is 0.3 mm. and its length in a picture is 4.5 cm. , then the drawing scale =  $\dots\dots\dots$ 

(4) The area of the triangle =  $\frac{1}{2} \times \dots\dots\dots \times \dots\dots\dots$

2 Choose the correct answer :

(1) The range of the set of values : 7 , 3 , 6 , 9 and 5 is  $\dots\dots\dots$ 

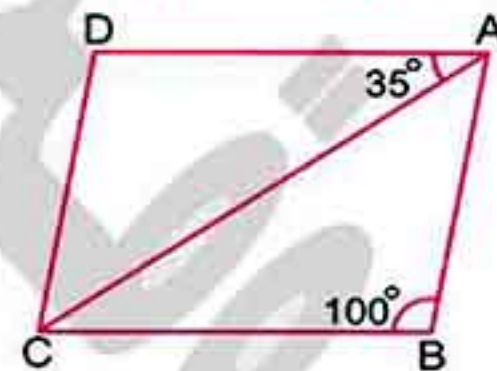
( 2 or 4 or 6 or 12 )

(2)  $\frac{3}{4} = \dots\dots\dots$  (in decimal form) ( 0.2 or 0.5 or 0.25 or 0.75 )(3) An agricultural tractor ploughs 28 feddans in 4 hours , then the time which is needed to plough 42 feddans is  $\dots\dots\dots$  hours.

( 4 or 6 or 7 or 8 )

(4) In the opposite figure :

ABCD is a parallelogram. , then

 $m(\angle ACD) = \dots\dots\dots^\circ$ 

( 35 or 45 or 100 or 180 )

3 [a] A container has 12 litres of oil , it is wanted to put them in smaller bottles the capacity of each of them is  $400 \text{ cm}^3$ . Calculate the number of bottles which are needed.

[b] If the buying price of electric sets is L.E. 72 000 and sold at 12 % profit. Calculate the selling price.



4 [a] The ratio among the measures of the angles of a triangle is 2 : 3 : 4  
Find the measure of each angle in this triangle.

[b] A metallic cube of edge length 12 cm. It needs to be converted it into ingots in the shape of cuboid each of them of dimensions 3 cm. , 4 cm. and 6 cm. Calculate the number of ingots that are obtained.

5 [a] Two persons started a commercial business , the first paid L.E. 5 000 and the second paid L.E. 8 000 , at the end of the year , the net profit was L.E. 3 900 Calculate the share of each of them from the profit.

[b] The following table shows the marks of 100 students in one month in math test :

Marks	10 –	20 –	30 –	40 – 50	Total
Number of students	15	30	40	15	100

Draw the frequency curve of this distribution.

Model

2

Answer the following questions :

1 Choose the correct answer :

( 1 ) If one angle of a parallelogram is right , then it is called a .....

( rectangle **or** square **or** rhombus **or** cube )

( 2 )  $\frac{24}{5} = \dots\dots\dots$

(  $4\frac{1}{5}$  **or**  $3\frac{2}{5}$  **or**  $4\frac{4}{5}$  **or**  $2\frac{4}{5}$  )

( 3 ) If the marks of 6 students in one exam are 29 , 33 , 57 , 40 , 36 and 49 ,  
then the range of these marks = .....

( 32 **or** 33 **or** 28 **or** 86 )

( 4 ) If  $\frac{4}{6} = \frac{12}{x}$  , then  $x + 2 = \dots\dots\dots$

( 16 **or** 18 **or** 20 **or** 22 )

2 Complete the following statements :

( 1 )  $65 \text{ dm}^3 = \dots\dots\dots$  litres.

( 2 ) A wooden box in the form of a cube , its external volume is  $1\,000 \text{ cm}^3$   
and its capacity is  $729 \text{ cm}^3$  , then the volume of wood of the box  
=  $\dots\dots\dots \text{ cm}^3$



## Final Examinations

( 3 ) The following table shows the marks of 50 students in one month in math :

Marks	10 –	20 –	30 –	40 – 50	Total
Number of students	5	15	20	10	50

then the number of students whose marks are less than 40 is ..... students.

( 4 ) If the height of the fence of the villa in the design is 5 cm. and its real height is 6 metres , then the drawing scale is ..... : .....

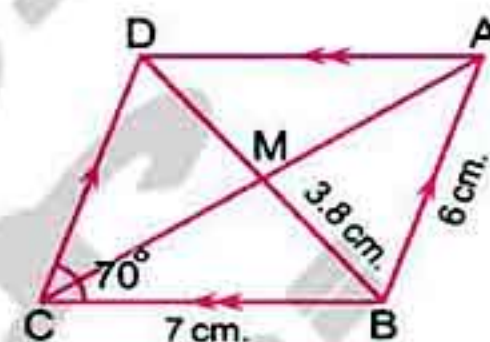
3 [a] Three persons started in business , the first paid 15 000 pounds , the second paid 25 000 pounds and the third paid 20 000 pounds , at the end of the year , the profit was 5 520 pounds.  
Calculate the share of each of them.

[b] 10 litres of water were poured in a vessel in the shape of a cuboid , its base is a square of side length 25 cm. Find the height of the water in the vessel.

4 [a] In one of our schools , there are 360 students , if the ratio between the number of boys and the number of girls is 1 : 2  
Find each of the number of boys and girls.

[b] In the opposite figure :

ABCD is a parallelogram in which  $AB = 6$  cm.  
 ,  $BC = 7$  cm. ,  $BM = 3.8$  cm. ,  $m(\angle C) = 70^\circ$   
Without using geometrical instruments.  
Find :  $m(\angle ADC)$  , the perimeter of  $\triangle BCD$



5 [a] Heba bought a mobile phone for 660 pounds with a discount 15 %  
Calculate the price of the mobile phone before the discount.

[b] The following table shows the number of hours which are spent by 40 pupils to study their lesson daily :

Number of hours	1 –	2 –	3 –	4 –	5 – 6	Total
Number of pupils	6	3	8	12	11	40

Represent these data by the frequency curve.



## Model for the special needs students

Answer the following questions :

## 1 Complete the following statements :

(1) 5 000 grams : 8 kilograms = ..... : ..... (in the simplest form)

(2)  $\frac{3}{10} = \dots\dots\dots \%$ (3) The volume of a cuboid = the area of base  $\times$  .....(4) 3 litres = .....  $\text{cm}^3$ 

## 2 Choose the correct answer :

(1) The range of the values 50 , 25 , 35 and 20 is .....

( 10 **or** 20 **or** 30 )(2) If  $\frac{2}{3} = \frac{10}{x}$  , then  $x = \dots\dots\dots$ ( 6 **or** 15 **or** 20 )

(3) The diagonals are perpendicular in .....

( rectangle **or** square **or** parallelogram )

(4) If the real length is 6 m. and the drawing length is 6 cm. , then the drawing scale is .....

( 1 : 10 **or** 1 : 1 000 **or** 1 : 100 )

## 3 Choose from column (A) to the suitable one from column (B) :

A
(1) The cube has ..... edges.
(2) If the drawing scale $< 1$ , this expresses .....
(3) The ratio between the side length of the square and its perimeter = .....
(4) All of angles of the rectangle are equal in measure and the measure each of any of them = .....

B
minimization
12
$90^\circ$
1 : 4



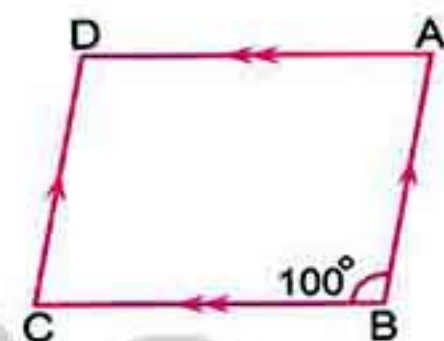
## Final Examinations

## 4 Put true (✓) or false (X) :

- (1) The numbers 1 , 2 , 6 and 12 are proportional. ( )
- (2) If the percentage of boys is 35 % from the total of the number of pupils in a class , then the percentage of girls is 20 % ( )
- (3) The favorite colour is a descriptive data. ( )
- (4) The volume of a cube of edge length 3 cm. = 9 cm<sup>2</sup> ( )

## 5 [a] Complete the following statements :

- (1) If  $A : B = 2 : 3$  ,  $B : C = 3 : 5$  , then  $A : C = \dots\dots\dots$  :
- (2) In the opposite figure :  
ABCD is a parallelogram , then  
 $m(\angle D) = \dots\dots\dots^\circ$



## [b] The following table shows the marks of 50 students in one month in maths :

Marks	10 –	20 –	30 –	40 – 50	Total
Number of students	6	10	20	14	50

Complete :

- (1) The number of students whose marks are less than 20  
= ..... students.
- (2) The number of students whose marks are 40 or more  
= ..... students.



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## Some School's Examinations from Different Governorats 2020

## 1 Cairo Governorate

Nasr City Edu. Administration  
St. George's College

Answer the following questions :

## 1 Choose the correct answer :

- (1) If the ratio among the measurements of the angles of the triangle is 3 : 4 : 5 , then the measure of the greatest angle = .....  
( 90° or 75° or 60° or 55° )
- (2)  $16 : 48 = \dots\dots\dots : \dots\dots\dots$  ( 1:2 or 1:4 or 1:5 or 1:3 )
- (3) 5.7 litres = .....  $\text{cm}^3$  ( 5.7 or 570 or 5700 or 57 )
- (4) 3 , 4 ,  $x$  and 12 are proportional quantities , then  $x = \dots\dots\dots$   
( 9 or 5 or 7 or 8 )
- (5) The two diagonals are equal in length and perpendicular in .....  
( parallelogram or square or rectangle or rhombus )
- (6)  $\frac{2}{5} = \dots\dots\dots \%$  ( 20 or 30 or 40 or 50 )
- (7) The range of the values 7 , 3 , 6 , 9 and 1 is .....  
( 8 or 1 or 7 or 0 )
- (8)  $\frac{1}{2}$  kg. : 700 gm. = ..... : ..... ( 2:7 or 7:8 or 5:7 or 7:9 )
- (9) If the drawing length of an object is 2 cm. and the real length is 20 m. , then the drawing scale is = .....  
( 1 : 10 or 1 : 100 or 1 : 1 000 or 1 : 10 000 )
- (10) If the volume of a cube =  $0.125 \text{ cm}^3$  , then its edge length = ..... cm.  
( 25 or 0.25 or 0.5 or 5 )
- (11) Ahmed drinks 21 glasses of milk weekly , then he drinks ..... glasses of milk everyday.  
( 3 or 9 or 6 or 12 )
- (12) From the quantitative data is .....  
( favorite colour or name or age or blood type )
- (13) The ratio between the perimeter of an equilateral triangle and its side length = .....  
( 1 : 3 or 2 : 3 or 3 : 1 or 3 : 2 )
- (14)  $\frac{1}{4} : \frac{1}{3} = \dots\dots\dots$  ( 1 : 4 or 1 : 3 or 3 : 4 or 4 : 3 )





## Final Examinations

## 2 Complete each of the following :

- (1) If the lower limit of the set = 10 and the upper limit = 30 ,  
then the centre = .....
- (2) If  $A : B = 1 : 2$  and  $B : C = 3 : 5$  , then  $A : C = \dots\dots\dots$  :
- (3) If the drawing length  $< 1$  , this express .....
- (4) 3 weeks : 24 days = ..... : ..... (in the simplest form)
- (5)  $1 - (37\% + 41\%) = \dots\dots\dots$
- (6) The ratio between two numbers is  $7 : 12$  , if their sum is 76 , then the  
greater number = .....
- (7) A cuboid is of dimensions 8 cm. , 6 cm. and 10 cm. , then its volume is  
.....  $\text{cm}^3$
- (8) If the perimeter of one face of a cube is 24 cm. , then its volume is .....  $\text{cm}^3$

## 3 Answer the following questions :

- (1) Khaled bought a flat for L.E. 150 000 After selling it , he found that the  
percentage of his loss was 5 % Calculate the selling price of the flat.

.....

.....

.....

- (2) A cube , the perimeter of its base is 40 cm. Calculate its volume.

.....

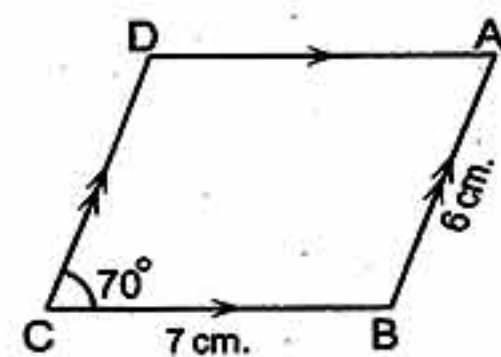
.....

- (3) In the opposite figure :

ABCD is a parallelogram ,  
in which  $m(\angle BCD) = 70^\circ$  ,  
 $AB = 6 \text{ cm.}$  and  $BC = 7 \text{ cm.}$

Find : [a]  $m(\angle D)$

[b] The length of each of  $\overline{CD}$  and  $\overline{AD}$



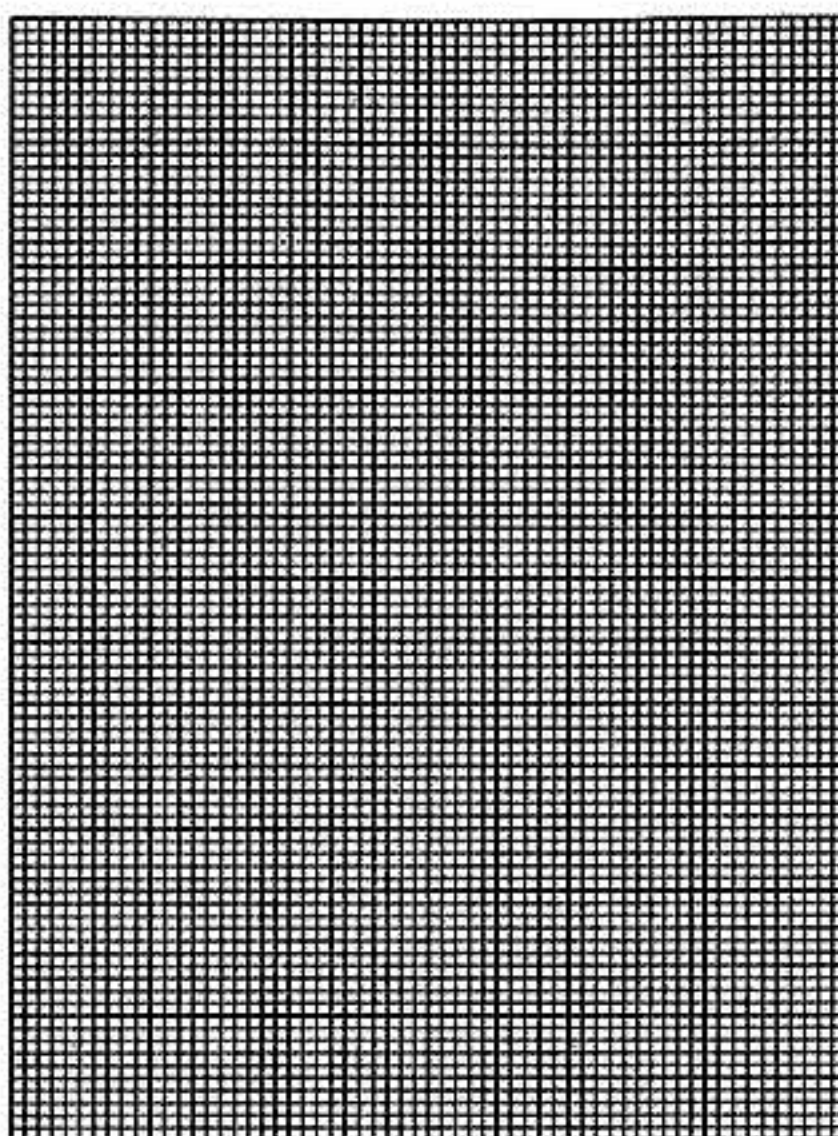
- (4) The following table shows the number of hours , which are spent by 60 pupils :

Number of hours	10 -	20 -	30 -	40 -	50 -	Total
Number of pupils	9	13	18	12	8	60

Represent this distribution by a frequency curve.



## Final Examinations



## 2 Cairo Governorate

Maadi Educational Zone  
Victory College Maadi

Answer the following questions :

## 1 Choose the correct answer :

- (1) If  $A : B = 2 : 3$  and  $B : C = 3 : 5$ , then  $A : C = \dots\dots\dots$   
(3 : 2 or 5 : 2 or 4 : 5 or 2 : 5)
- (2) The following data are descriptive data except .....  
( favorite colour or age or name or birth place )
- (3) 8 000 gm. : 5 kg. = ..... : ..... ( 4 : 5 or 5 : 8 or 2 : 3 or 8 : 5 )
- (4) If one angle of a parallelogram is right, then its called .....  
( rectangle or rhombus or square or cube )
- (5) The cuboid has ..... faces. ( 6 or 4 or 12 or 8 )
- (6)  $1.75 = \dots\dots\dots\%$  ( 75 or 0.175 or 175 or 17.5 )

## 2 Complete :

- (1) If the drawing scale  $> 1$ , this expresses .....
- (2) Mona deposit L.E. 9 000 in a bank with interest 11 % per year, the amount of sum after one year = L.E. ....





( 3 ) If Hazem studies 21 hours weekly , then the rate = ..... hours/day

( 4 ) The ratio between two numbers = .....

### 3 Choose the correct answer :

( 1 )  $5.6 \text{ dm}^3 = \dots\dots\dots$  litres. ( 5600 or 560 or 5.6 or 56 )

( 2 ) The ratio between the side length of an equilateral triangle and its perimeter is ..... ( 1:3 or 1:4 or 1:1 or 3:1 )

( 3 ) The ..... is a ratio with second term is 100  
( proportion or percentage or rate or drawing scale )

( 4 ) The ratio between a child's age to his father's age is 2 : 9 , if the child's age is 8 years , then his father's age is ..... years. ( 63 or 13 or 36 or 18 )

( 5 ) If  $\frac{2}{3} = \frac{12}{x}$  , then  $x + 2 = \dots\dots\dots$  ( 16 or 20 or 18 or 36 )

( 6 ) A primary school has 540 pupils , if the ratio between the number of boys and the number of girls is 4 : 5 , then the number of boys is .....  
( 300 or 240 or 352 or 675 )

### 4 Complete each of the following :

( 1 ) If the length of an insect in the picture is 10 cm. and its real length is 2 mm. , then the drawing scale = ..... :

( 2 ) In the parallelogram , the sum of the measures of any two consecutive angles is .....

( 3 ) The range of the 7 , 3 , 6 , 9 and 5 is .....

( 4 ) The sum of lengths of all edges of a cube is 132 cm. , then its volume is .....  $\text{cm}^3$

### 5 Answer the following :

( 1 ) Three persons participated in a commerce , the first paid L.E. 1 500 , the second paid L.E. 2 000 and the third paid L.E. 2 500 , at the end of the year the loss is L.E. 1 200  
Find the share of each of them from loss.

.....

.....

.....

.....

.....



## Final Examinations

- ( 2 ) 10 litres of water were poured in a vessel in the shape of a cuboid ,  
its base is square of side length is 25 cm.  
Find the height of the water in the vessel.

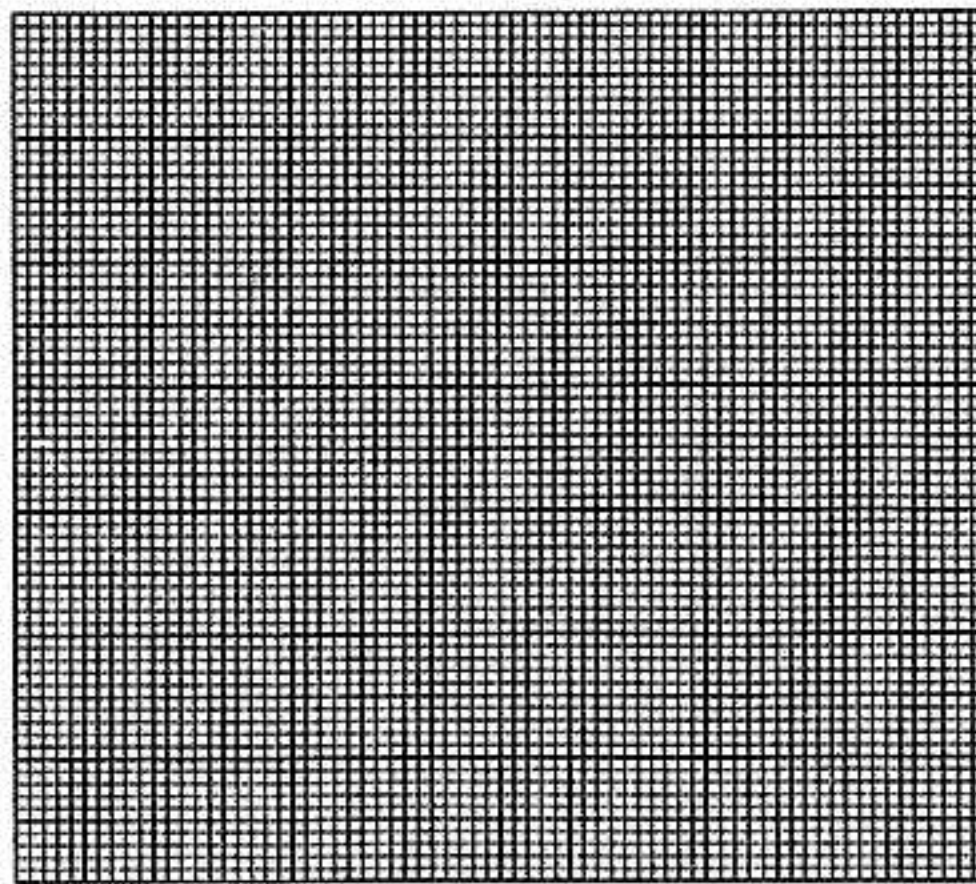
- ( 3 ) The perimeter of a rectangle is 140 cm. and the ratio between its  
dimensions is 3 : 4 Find its area.

- ( 4 ) Which is greater in volume , a cuboid whose dimensions are 12 cm. ,  
10 cm. and 8 cm. or a cube of edge length 10 cm. ?

- ( 5 ) The following table shows the number of hours which spent by 40 pupils to  
study their lessons daily :

Number of hours	1 –	2 –	3 –	4 –	5 – 6	Total
Number of pupils	6	3	8	12	11	40

Represent these data using the frequency curve.





## 3 Giza Governorate

Omranya Educational Zone  
El-Shahid (M.M.A) Exp. Lang. Sch.

Answer the following questions :

## 1 Choose the correct answer :

- (1) The volume of a cube equals  $125 \text{ cm}^3$ , then the area of its base = .....  
(  $5 \text{ cm}^2$  or  $25 \text{ cm}^2$  or  $125 \text{ cm}^2$  or  $100 \text{ cm}^2$  )
- (2)  $\frac{2}{5} = \dots\dots\dots \%$  ( 20 or 30 or 40 or 50 )
- (3) If  $a : b = 3 : 5$  and  $b : c = 5 : 7$ , then  $a : c = \dots\dots\dots$   
( 2 : 3 or 3 : 4 or 3 : 7 or 8 : 7 )
- (4)  $1 - 25\% = \dots\dots\dots$  (  $\frac{3}{4}$  or  $\frac{1}{4}$  or  $\frac{1}{8}$  or  $\frac{3}{8}$  )
- (5) If the numbers 3, 5,  $x$  and 20 are proportional, then  $x + 3 = \dots\dots\dots$   
( 6 or 12 or 15 or 21 )
- (6) If the drawing length is 6 cm., and the real length is 6 metres, then the drawing scale = .....  
( 1 : 10 or 1 : 100 or 1 : 1000 or 1 : 1 )

## 2 Choose the correct answer :

- (1)  $\frac{3}{4}$  litre = ..... mL. ( 0.75 or 7.5 or 750 or 75 )
- (2) The two diagonals are perpendicular in .....  
( rectangle or rhombus or triangle or parallelogram )
- (3) The range of the values 7, 3, 6, 9 and 1 is .....  
( 8 or 1 or 7 or 0 )
- (4) The ratio between Aya's age and Eman's age is 1 : 6, if Aya's age is 6 years old, then Eman's age is ..... years old. ( 32 or 36 or 39 or 42 )
- (5) If 45% of  $x = 90$ , then  $x = \dots\dots\dots$  ( 20 or 100 or 200 or 300 )
- (6) The ratio between 15 hours and one day in the simplest form = .....  
( 1 : 15 or 15 : 1 or 8 : 5 or 5 : 8 )

## 3 Complete :

- (1) The number of axes of symmetry of a parallelogram is .....
- (2) The two diagonals are equal in length and perpendicular in .....
- (3) The difference between the maximum value and the minimum value is called .....
- (4)  $12 : 18 : 36 = \dots\dots\dots : \dots\dots\dots : \dots\dots\dots$  (in the simplest form).





## Final Examinations

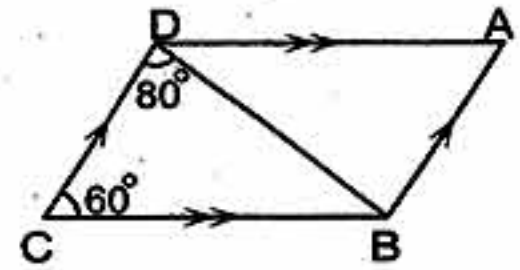
- ( 5 ) A rate is .....
- ( 6 ) 30 months : 3 years = ..... : ..... (in the simplest form).
- ( 7 ) If 2 ,  $x$  , 8 and 20 are proportional , then  $x$  = .....
- ( 8 ) The drawing scale = .....

## 4 Answer the following :

- ( 1 ) Find the cost price of goods sold for 21 275 pounds with profit percentage 15 %  
.....  
.....  
.....

- ( 2 ) A photo was taken for an insect by enlargement ratio 100 : 1 , if the real length is 0.8 cm. Find the length in the picture.  
.....  
.....  
.....

- ( 3 ) In the opposite figure :  
ABCD is a parallelogram.  
Find : [a]  $m(\angle ADB)$   
[b]  $m(\angle A)$   
.....  
.....



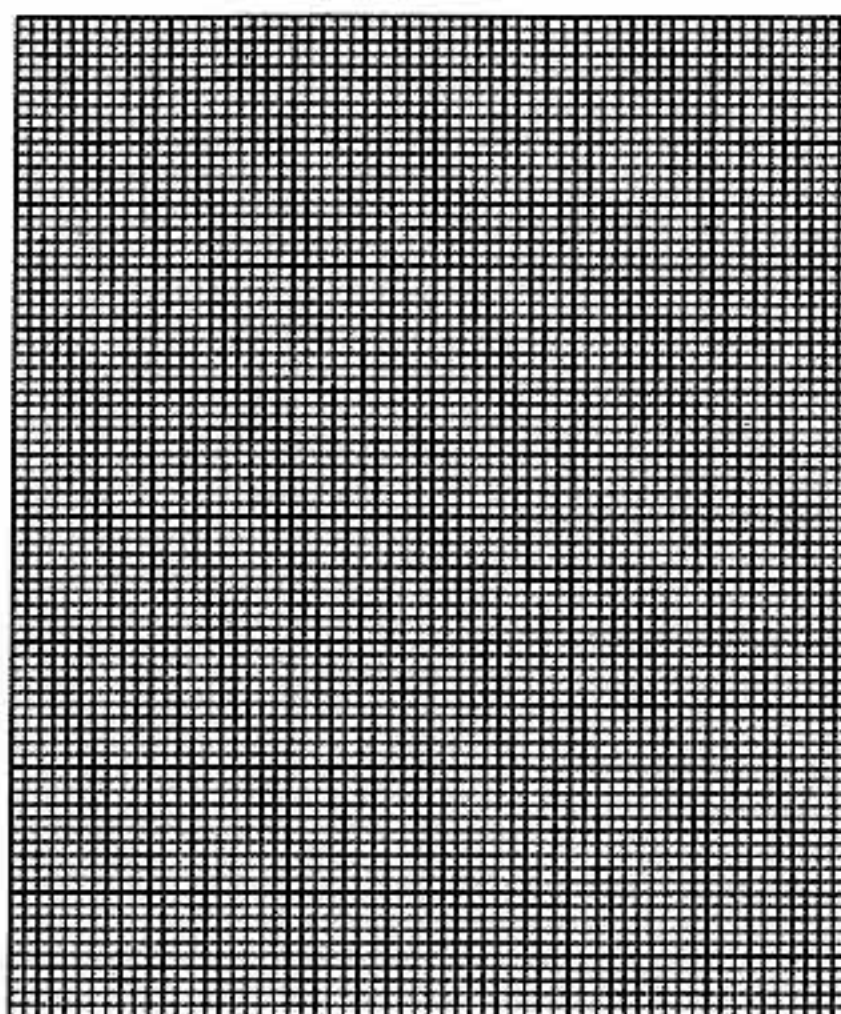
- ( 4 ) Which is greater in volume , a cube of edge length 5 cm. or a cuboid of dimensions 3 cm. , 5 cm. and 7 cm. ?  
.....  
.....  
.....

- ( 5 ) The following table shows the marks of 100 students in a maths test :

Marks	10 –	20 –	30 –	40 – 50	Total
Number of students	15	30	40	15	100

Draw the frequency curve of this distribution.





## 4 Alexandria Governorate

West Educational Zone  
Mathe Supervision



Answer the following questions :

1 Choose the correct answer :

- (1)  $\frac{1}{2}$  kg. .... 700 gm. ( $<$  or  $>$  or  $=$  or  $\geq$ )
- (2)  $\frac{3}{4} : \frac{5}{6} = 9 : \dots\dots\dots$  (6 or 10 or 11 or 12)
- (3)  $\frac{7}{20} = \dots\dots\dots$  (7 % or 20 % or 35 % or 42 %)
- (4) The parallelogram is a quadrilateral in which the sum of the measures of any two consecutive angles equals .....  
(90° or 100° or 120° or 180°)
- (5)  $4 \text{ m}^3 = \dots\dots\dots \text{ dm}^3$  (40 or 400 or 4 000 or 40 000)
- (6) If the numbers 4 , x , 12 , 18 are proportional , then x = .....  
(6 or 8 or 10 or 12)
- (7) 8 hours : 3 days = 1 : .....  
(3 or 6 or 9 or 12)
- (8) If  $\frac{5}{8} = \frac{15}{x}$  , then x = .....  
(8 or 16 or 24 or 32)
- (9) If the distance between two cities on a map is 3 cm. , and the real distance between them is 9 km. , then the drawing scale of the map = 1 : .....  
(3 or 3 000 or 30 000 or 300 000)
- (10) If the number of boys in a class is 35 % from the total number of pupils , then the percentage of girls is ..... (35 % or 65 % or 50 % or 55 %)

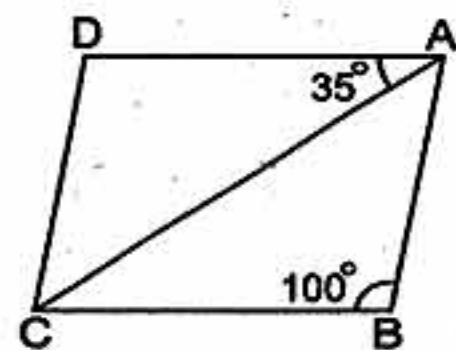


## Final Examinations

- (11) The cuboid has six faces each of them is .....  
( a rectangle or a square or a rhombus or a cube )
- (12) If the marks of 6 students in one exam is 29 , 33 , 57 , 40 , 36 , 49 , then  
the range of these marks = ..... ( 32 or 33 or 28 or 86 )

## 2 Complete each of the following :

- ( 1 ) The volume of a cube of edge length 4 cm. = .....  $\text{cm}^3$
- ( 2 ) As comparing between two similar quantities or numbers and of the same unit , then the resultant fraction is called .....
- ( 3 ) The ratio between the circumference of the circle and its diameter length  
= ..... : .....
- ( 4 ) If the real length of an insect is 0.3 mm. and its length in a picture is 4.5 cm.  
then the drawing scale = ..... : .....
- ( 5 ) In the opposite figure :  
ABCD is a parallelogram  
then  $m(\angle ACD) = \dots\dots\dots^\circ$
- ( 6 ) If  $A : B = 2 : 3$  ,  $B : C = 3 : 5$  , then  $A : C = \dots\dots\dots : \dots\dots\dots$
- ( 7 )  $\frac{\text{The drawing length}}{\text{The real length}} = \dots\dots\dots$
- ( 8 ) The maximum mark – The minimum mark = .....



## 3 Answer the following :

- ( 1 ) If the ratio between the weight of Hani and the weight of Ahmed is 5 : 6 ,  
if the weight of Ahmed is 60 kilograms.  
Calculate the weight of Hani.  
.....  
.....  
.....  
.....
- ( 2 ) If Hazem studies 21 hours weekly , then find the rate of his studying daily.  
.....
- ( 3 ) A cuboid of volume is  $2\,128\text{ cm}^3$  , its height is 14 cm. Find the area of its base.  
.....



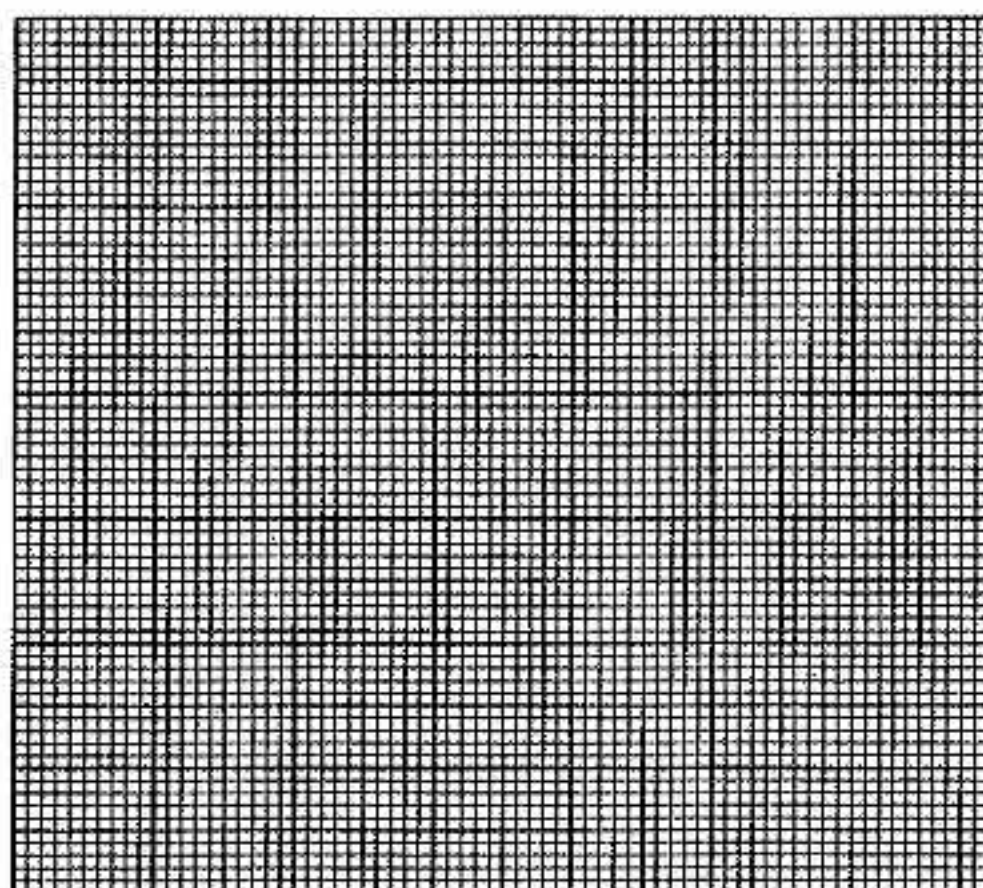
## Final Examinations

- ( 4 ) A swimming pool in the shape of a cuboid , whose internal dimensions are 40 m. , 30 m. and 1.8 m. Find its capacity in litres.

- ( 5 ) The following table shows the number of hours which spent by 40 pupils to study their lessons daily :

Number of hours	1 –	2 –	3 –	4 –	5 – 6	Total
Number of pupils	6	3	8	12	11	40

Represent these data using the frequency curve.



## 5 El-Kalyoubia Governorate

Banha Educational Zone  
Maths Supervision



Answer the following questions :

- 1 Choose the correct answer :

( 1 ) If  $A : B = 2 : 3$  ,  $B : C = 3 : 5$  , then  $A : C = \dots\dots\dots$

( 3 : 5 or 2 : 5 or 5 : 3 or 5 : 2 )

( 2 ) If  $\frac{4}{6} = \frac{12}{x}$  , then  $x + 2 = \dots\dots\dots$

( 16 or 18 or 20 or 22 )

( 3 )  $\frac{3}{4} = \dots\dots\dots$  (in a decimal form)

( 0.2 or 0.25 or 0.5 or 0.75 )

( 4 ) A car consumes 20 litres of petrol to cover a distance 250 km. , then the rate of consumption of the car is  $\dots\dots\dots$

( 0.08 L./km. or 0.8 L./km. or 8 L./km. or 80 L./km. )

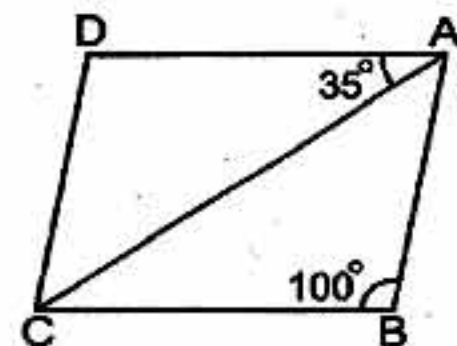


هذا العمل حصري على موقع ذاكرولى التعليمي ولا يسمح بنشره فى أى مواقع أخرى  
لمزيد من أعمالنا تفضل بزيارة موقعنا على الانترنت <https://www.zakrooly.com>



## Final Examinations

- (5) If the real length of an insect is 0.3 mm. and its length in a picture 4.5 cm. , then the drawing scale = .....  
( 1 : 15 or 1 : 150 or 150 : 1 or 15 : 1 )
- (6)  $\frac{3}{10} = \dots\dots\dots$  ( 300 % or 40 % or 30 % or 0.3 % )
- (7) If the volume of a cuboid is  $64 \text{ cm}^3$  and the area of its base  $16 \text{ cm}^2$  , then its height = .....  
( 4 m. or 0.4 cm. or 4 dm. or 4 cm. )
- (8) In the opposite figure :  
ABCD is parallelogram  
, then  $m(\angle ACD) = \dots\dots\dots$   
(  $35^\circ$  or  $55^\circ$  or  $45^\circ$  or  $60^\circ$  )
- (9) A cube , the sum of lengths of all edges is 132 cm.  
, then its volume = .....  
(  $1771 \text{ cm}^3$  or  $1331 \text{ cm}^3$  or  $1444 \text{ cm}^3$  or  $299968 \text{ cm}^3$  )
- (10) In your class , if the percentage of boys is 35 % from the total number of pupils , then the percentage of the girls in this class = .....  
( 65 % or 55 % or 75 % or 35 % )
- (11) The following data are descriptive data except .....  
( favorite color or age or birth place or blood species )
- (12) If the numbers 9 , 21 , 3 , x are proportional , then  $x = \dots\dots\dots$   
( 9 or 8 or 7 or 6 )



## 2 Complete the following :

- (1) ABC is an equilateral triangle where  $AB = 5 \text{ cm}$  . , then the ratio between AB and the perimeter of triangle ABC = ..... : .....
- (2) The range of the set of values 50 , 25 , 35 , 20 is .....
- (3) An agricultural tractor ploughs 28 feddans in 4 hours , the time which need to plough 42 feddans is ..... hours.
- (4) The ratio between child's age and his father is 1 : 10 and the age of child is 6 years , then the father's age = ..... years.
- (5) Hasnaa drew a picture for Omar with drawing scale 1 : 40 , if the real height of Omar is 160 cm. , then the height of Omar in the picture = ..... cm.
- (6) If one angle in a parallelogram is right , then it is called .....
- (7)  $2.65 \text{ litres} = \dots\dots\dots \text{ dm}^3 = \dots\dots\dots \text{ cm}^3$
- (8) 16 kirats : 1 feddan = ..... : ..... (in the simplest form)



## Final Examinations

## 3 Answer the following :

- ( 1 ) Two persons started a commercial business , the first paid L.E. 5 000 and the second paid L.E. 8 000 At the end of the year , the profit was L.E. 3 900 Calculate the share of each of them from the profit.

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- ( 2 ) A building worker used 1 500 bricks to build a wall , calculate the volume of the wall in  $m^3$  if the brick is in the shape of a cuboid of dimension 25 cm. , 12 cm. , 6 cm.

.....

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.....

- ( 3 ) An auto fair owner bought a car for L.E. 45 000 , then he spent L.E. 5 000 for repairing it , then he sold it for L.E. 55 000 Calculate :

[a] The profit after selling.

[b] The percentage of profit.

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- ( 4 ) 10 litres of water were poured in a vessel in the shape of a cuboid its base is a square of side length is 25 cm. Find the height of water in the vessel.

.....

.....

- ( 5 ) The following table shows the number of hours which spent by 40 pupils to study their lessons :

Number of hours	1 –	2 –	3 –	4 –	5 – 6	Total
Number of pupils	6	X	8	12	11	40

[a] Find the value of X

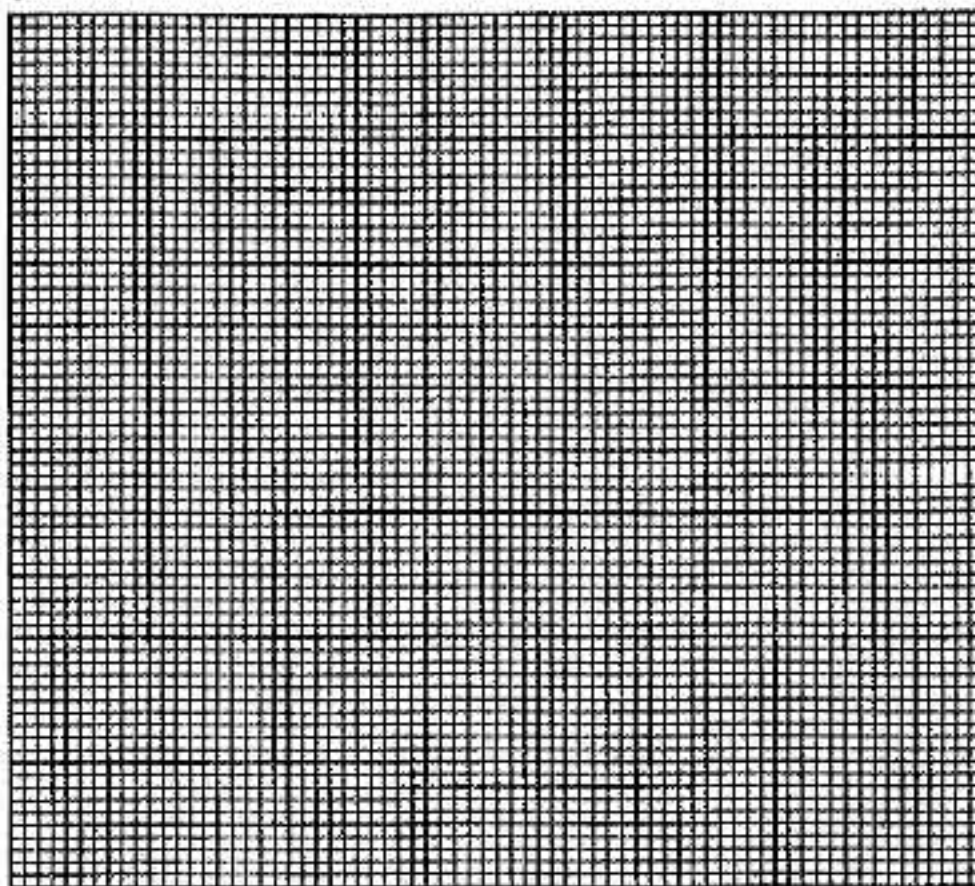
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## Final Examinations

[b] Represent these data using the frequency curve.



## 6 El-Sharkia Governorate

Belbeis Educational Administration  
Al-Rasala Language Schools

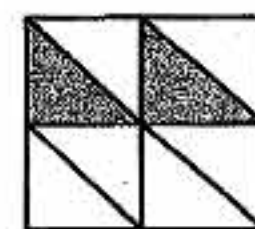


Answer the following questions :

1 Choose the correct answer :

( 1 ) The fraction that represents the shaded part = .....

(  $\frac{1}{4}$  or  $\frac{3}{4}$  or  $\frac{2}{6}$  or  $\frac{4}{7}$  )



( 2 )  $0.23 \text{ m}^3 = \dots\dots\dots \text{ L}$

( 0.23 or 230 or 2.3 or 0.023 )

( 3 ) If  $\frac{4}{6} = \frac{8}{x}$ , then  $x + 2 = \dots\dots\dots$

( 15 or 14 or 16 or 12 )

( 4 ) The ratio between 15 hours , one day = .....

( 1 : 15 or 15 : 1 or 8 : 5 or 5 : 8 )

( 5 ) If the range of some values is 40 and the number of sets is 10 , then the length of set = .....

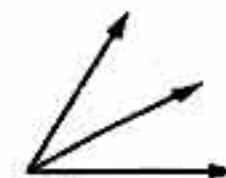
( 5 or 7 or 6 or 4 )

( 6 ) All of the following data are quantitative except .....

( tallness or age or name or phone number )

( 7 ) The number of angles in the following shape = .....

( 1 or 2 or 3 or 4 )



( 8 ) The range of the values 29 , 33 , 57 , 40 , 36 is .....

( 27 or 28 or 29 or 24 )



## Final Examinations

- (9) If  $10A$ ,  $2$ ,  $2A$ ,  $B$  are proportional, then  $B = \dots\dots\dots$   
(0.2 or 0.4 or 0.5 or 0.3)
- (10) If  $x$ ,  $16$ ,  $6$ ,  $8$  are proportional, then  $x = \dots\dots\dots$   
(1 or 6 or 8 or 12)
- (11)  $6.5 \text{ L.} = \dots\dots\dots \text{ dm}^3$  (56 or 6.5 or 5600 or 56000)
- (12) If a car covered  $180 \text{ km.}$  in three hours, then the velocity of this car  
=  $\dots\dots\dots \text{ km./hr.}$  (80 or 60 or 50 or 20)

## 2 Complete the following :

- (13)  $\frac{5}{4} : 2 = \dots\dots\dots : \dots\dots\dots$  (in the simplest form)
- (14) If the lower limit of the set =  $10$  and the upper limit =  $30$ , then its centre =  $\dots\dots\dots$
- (15) The ratio between the width and the length of a rectangle is  $3 : 4$ , then  
length : perimeter =  $\dots\dots\dots$
- (16) An amount of money is divided between two persons in the ratio  $5 : 6$ , then  
what the first took =  $\dots\dots\dots$  the total.
- (17)  $1 - (24\% + 35\%) = \dots\dots\dots \%$
- (18) If the drawing scale  $< 1$ , its represents  $\dots\dots\dots$
- (19) Discover the pattern and write the description of  $\triangle \bigcirc \triangle \bigcirc$  is  $\dots\dots\dots$
- (20) The range of values  $(6, 2, 7, x)$  is  $9$ , then  $x = \dots\dots\dots$

## 3 Answer the following questions :

- (21) In a school, if the number of students is  $560$  students, if the number of girls  $\frac{3}{5}$  of boys, find the number of each of boys and girls.

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- (22) Ahmed drew a picture of his brother Osama by drawing scale  $1 : 40$ , if the real length is  $160 \text{ cm.}$  Find the drawing length.

.....

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## Final Examinations

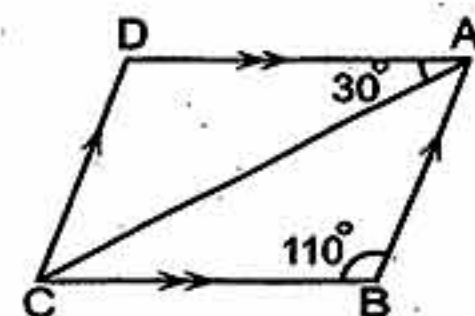
- (23) A cube of cheese , its edge length is 15 cm. , it is wanted to be divided it into small cubes , the edge length of each is 3 cm. for presenting them through meals. Calculate the number of the resulting small cubes.

.....

.....

.....

- (24) The opposite figure shows a parallelogram in which  $m(\angle B) = 110^\circ$  and  $m(\angle DAC) = 30^\circ$   
Find :  $m(\angle D)$  ,  $m(\angle BAC)$  and  $m(\angle ACD)$



.....

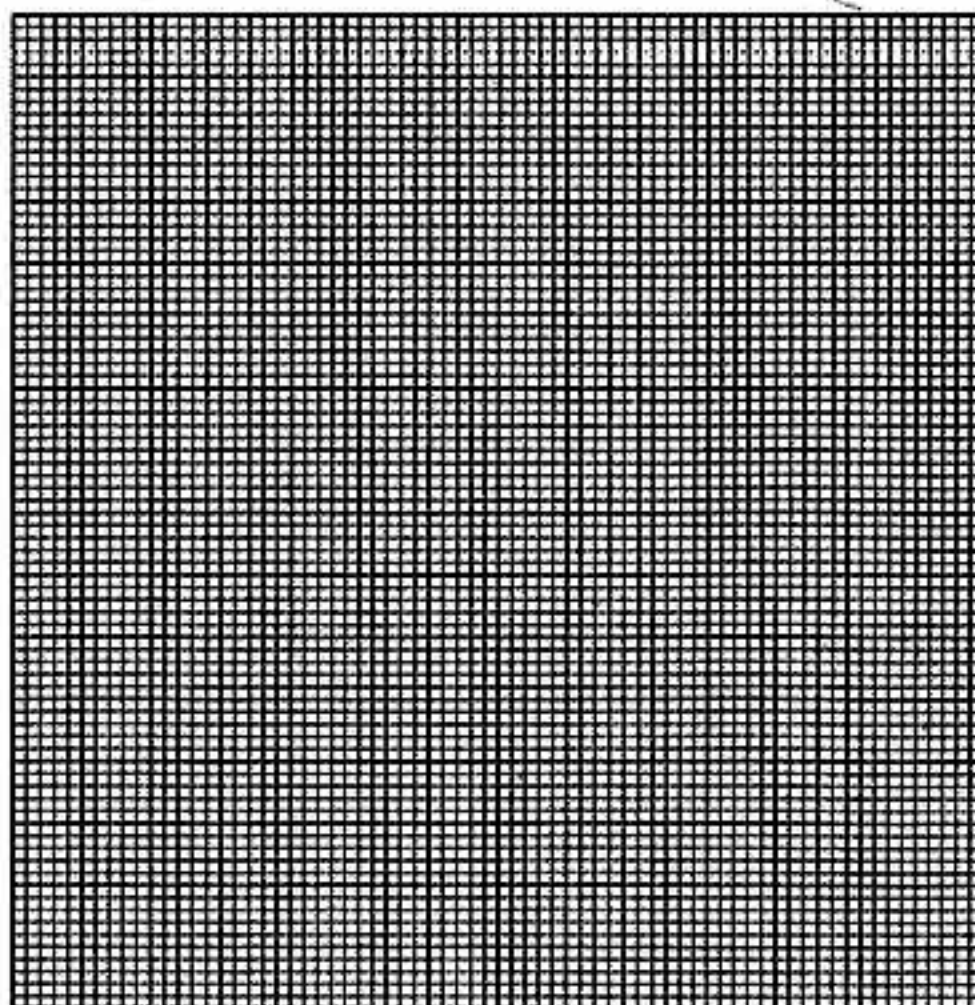
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- (25) The following table shows a sample of patients who suffer from a certain disease in a hospital due to the hours which were spent till they became healthy :

Number of hours	1 -	2 -	3 -	4 -	5 -	6 -	Total
Number of patients	7	11	15	6	4	2	45

Represent these data by a frequency curve.





## 7 El-Monofia Governorate

Shiben El-Kom Educational Directorate  
Maths Department

Answer the following questions :

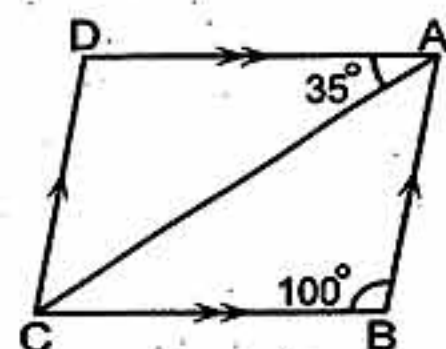
1 Choose the correct answer :

(1) The following data are descriptive data except .....

( favorite color **or** age **or** birth place **or** blood species )

(2) In the opposite figure :

ABCD is parallelogram

, then  $m(\angle ADC) = \dots\dots\dots$ (  $35^\circ$  **or**  $45^\circ$  **or**  $100^\circ$  **or**  $135^\circ$  )(3) If the numbers 3 , 5 ,  $x$  and 20 are proportional , then  $x = \dots\dots\dots$ ( 6 **or** 12 **or** 15 **or** 21 )

(4) If one of angles of the parallelogram is right , then the resulting figure is

a .....

( rectangle **or** square **or** rhombus **or** cube )

(5) If an agriculture tractor ploughs 28 feddans in 4 hours , then the time

needed to plough 42 feddans is ..... hours. ( 4 **or** 6 **or** 7 **or** 8 )(6)  $\frac{5}{4} : 3 \frac{1}{4} = \dots\dots\dots$ ( 5 : 13 **or** 1 : 3 **or** 3 : 1 **or** 5 : 9 )(7) The sum of edge lengths of a cube is 24 cm. , then its volume = .....  $\text{cm}^3$ ( 2 **or** 8 **or** 12 **or** 24 )

(8) 25 % of 1 000 = .....

( 2 000 **or** 1 500 **or** 250 **or** 500 )(9) The ratio between 250 grams and  $\frac{1}{2}$  kg. = .....( 2 : 1 **or** 2 : 3 **or** 1 : 2 **or** 3 : 2 )

(10) A machine produces 600 metres of clothes regularity in one hour and half ,

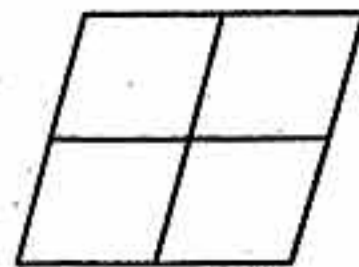
then the rate of production in metre per hour = ..... metre/hour

( 500 **or** 400 **or** 300 **or** 200 )

(11) In the opposite figure :

The number of parallelograms

which can be obtained is .....

( 4 **or** 5 **or** 7 **or** 9 )(12) The following in this pattern  $\triangle \bigcirc \bigcirc \square \triangle \bigcirc \bigcirc$  is .....(  $\triangle$  **or**  $\bigcirc$  **or**  $\square$  **or**  $\diamond$  )



## Final Examinations

## 2 Complete :

- (1)  $\frac{1}{4} = \dots\dots\dots \%$   
 (2) If the dimensions of cuboid are equal in length , then it is called a .....  
 (3) The range of the set of the values 7 , 3 , 15 and 8 is .....  
 (4) The ratio between the side length of the square and its perimeter  
 = ..... : .....  
 (5) If  $\frac{4}{6} = \frac{12}{x}$  , then  $x - 2 = \dots\dots\dots$   
 (6)  $1\,500\text{ dm}^3 = \dots\dots\dots$  litres  
 (7) If the real length of an insect is 0.5 millimetres and its length in the picture  
 is 4.5 cm. , then its drawing scale = ..... : .....  
 (8) If  $A : B = 2 : 3$  ,  $B : C = 3 : 5$  , then  $A : C = \dots\dots\dots : \dots\dots\dots$

## 3 Answer the following :

- (1) Heba bought a vacuum cleaner for 220 pounds with a discount 20 %  
 Calculate the price before discount.  
 .....  
 .....  
 .....  
 .....  
 (2) If the ratio between Hadir's weight and Basma's weight is 5 : 6 and the  
 difference between their weights is 10 kg. Calculate the weight of each of them.  
 .....  
 .....  
 .....  
 .....  
 (3) In a metallic cube whose edge length is 12 cm. we want to melt and convert  
 it to a number of cuboid alloys of dimensions 3 cm. , 4 cm. and 6 cm.  
 Calculate the number of alloys which can be obtained.  
 .....  
 .....  
 .....  
 (4) A container has 12 litres of oil. We need to distribute it on small bottles with  
 each one of the capacity  $400\text{ cm}^3$  Calculate the number of the needed bottles.  
 .....  
 .....

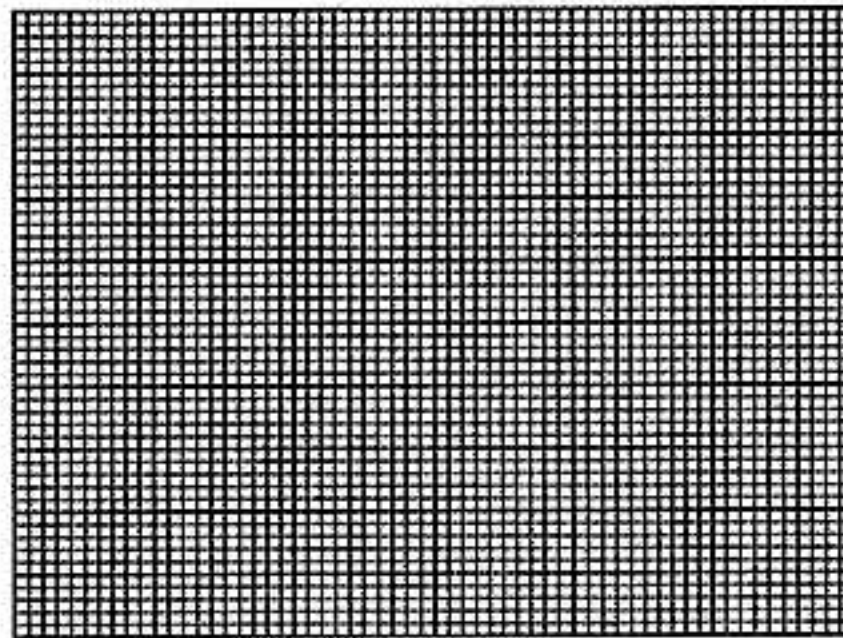


## Final Examinations

( 5 ) The following table shows the marks of 100 pupils in mathematics :

Marks	10 –	20 –	30 –	40 – 50	Total
No. of pupils	15	40	30	15	100

Draw the frequency curve for this distribution.



## 8 El-Gharbia Governorate

El-Gharbia Educational Directorate  
Maths Supervision



Answer the following questions :

1 Choose the correct answer :

- ( 1 ) If  $\frac{4}{6} = \frac{12}{x}$ , then  $x + 2 = \dots\dots\dots$  ( 16 or 18 or 20 or 22 )
- ( 2 ) The following data are descriptive data except  $\dots\dots\dots$   
( favorite color or age or birth place or blood species )
- ( 3 ) The volume of a cube is  $27 \text{ cm}^3$ , then the perimeter of its base equals  $\dots\dots\dots$  cm.  
( 36 or 24 or 27 or 12 )
- ( 4 ) The ratio between the circumference of the circle and its diameter length  
=  $\dots\dots\dots$  :  $\dots\dots\dots$  (  $\pi : 1$  or  $2\pi : 1$  or  $1 : 4$  or  $\pi : d$  )
- ( 5 ) If the volume of a cuboid =  $300 \text{ cm}^3$ , its base area =  $25 \text{ cm}^2$ , then its  
height =  $\dots\dots\dots$  cm. ( 12 or 13 or 14 or 15 )
- ( 6 ) If the range is 40 and the length of the set is 5, then the number of sets  
=  $\dots\dots\dots$  ( 5 or 6 or 7 or 8 )
- ( 7 ) If one angle of the parallelogram is right and its sides are equal in length, then  
it is called  $\dots\dots\dots$  ( square or rhombus or triangle or rectangle )
- ( 8 )  $1 - (35 \% + 25 \%) = \dots\dots\dots$  (  $\frac{1}{2}$  or  $\frac{1}{3}$  or  $\frac{2}{5}$  or  $\frac{3}{4}$  )





## Final Examinations

- (9) The diagonals are perpendicular and have the same length in the .....  
(square **or** rectangle **or** trapezium **or** parallelogram)
- (10)  $1.45 \text{ litres} + 0.5 \text{ dm}^3 = \dots\dots\dots \text{ litres.}$  (1.5 **or** 1.95 **or** 1.55 **or** 6.5)
- (11) The percentage is a ratio , which its second term is .....  
(10 **or** 100 **or** 1 000 **or** 10 000)
- (12) How many bottles of 750 mL. each can be filled with 30 litres of water ?  
(4 **or** 40 **or** 400 **or** 4 000)
- (13)  $\frac{1}{8} \text{ day} : 6 \text{ hours} : \frac{1}{2} \text{ day} = \dots\dots\dots : \dots\dots\dots : \dots\dots\dots$   
(1 : 2 : 6 **or** 1 : 2 : 4 **or** 1 : 2 : 3 **or** 3 : 2 : 1)
- (14) 12 % of 500 kg. = ..... kg. (40 **or** 50 **or** 60 **or** 70)

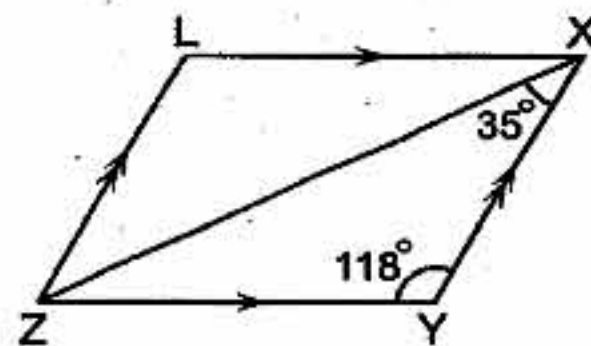
## 2 Complete the following :

- (15) If the ratio between measures of the angles of triangle is 5 : 6 : 7 , then the measure of the greatest angle = ..... °
- (16) 16 kirats : 1 feddan = ..... : ..... (in the simplest form)
- (17) 2.65 litres = .....  $\text{dm}^3$
- (18)  $\frac{7}{20} = \dots\dots\dots \%$
- (19) If the ratio  $a : b = 4 : 3$  and the ratio  $b : c = 2 : 3$  , then the ratio  $a : b : c = \dots\dots\dots : \dots\dots\dots : \dots\dots\dots$
- (20) If the sum of lengths of all edges of a cube is 132 cm. , then its volume = .....  $\text{cm}^3$
- (21) If the real length of an insect is 0.3 mm. and its length in a picture is 4.5 cm. , then the drawing scale = ..... : .....
- (22) If Hassan spends L.E. 45 within three days , then the rate of what Hassan spends per day is .....

## 3 Answer the following :

## (23) In the opposite figure :

XYZL is a parallelogram in which  
 $m(\angle Y) = 118^\circ$  ,  $m(\angle YXZ) = 35^\circ$   
 Find :  $m(\angle L)$  ,  $m(\angle LXZ)$





## Final Examinations

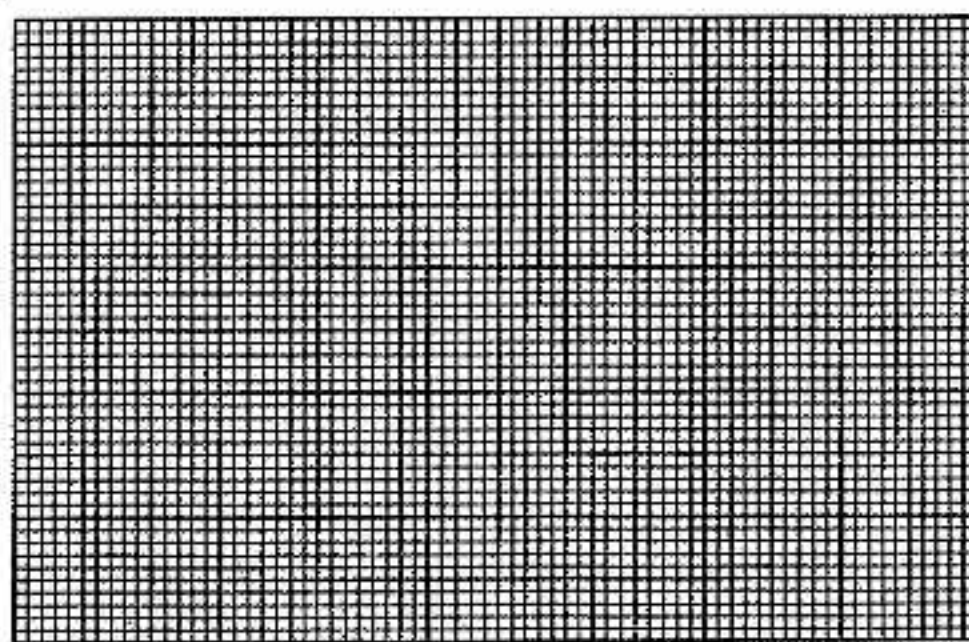
- (24) A metallic cube of edge length 12 cm. , it needs to be converted into ingots in the shape of cuboid each of them of dimensions 3 cm. , 4 cm. and 6 cm. Calculate the number of ingots that are obtained.
- .....
- .....
- .....

- (25) Three persons shared in business. The first paid 15 000 pounds , the second paid 25 000 pounds and the third paid 20 000 pounds. At the end of the year the net profit was 5 520 pounds. Calculate the share of each of them.
- .....
- .....
- .....

- (26) The following table shows the marks of 100 students in one month in maths :

Marks	20 –	30 –	40 –	50 –	Total
Number of students	15	30	40	15	100

Draw the frequency curve for this distribution.



## 9 El-Dakahlia Governorate

Maths Supervision



Answer the following questions :

1 Choose the correct answer :

- ( 1 ) The ratio between the length of diameter of circle and its circumference is ..... ( 1 : 1 or 1 : 4 or 1 :  $\pi$  or  $\pi$  : 1 )
- ( 2 ) ..... is a ratio between two different quantities.  
( Ratio or Proportion or Rate or Drawing scale )

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لمزيد من أعمالنا تفضل بزيارة موقعنا على الانترنت <https://www.zakrooly.com>



## Final Examinations

- (3)  $\frac{x}{5} = 60\%$  , then  $x + 3 = \dots\dots\dots$  (3 or 6 or 600 or 30)
- (4)  $\frac{1}{2} : \frac{3}{4} : \frac{2}{3} = \dots\dots\dots$  (6:8:9 or 8:9:6 or 9:6:8 or 6:9:8)
- (5) If the drawing scale  $> 1$  , then this expresses  $\dots\dots\dots$   
( magnification or reduction or congruent or otherwise )
- (6) If the number of sets is 8 and length of set is 5 , then the range =  $\dots\dots\dots$   
(3 or 13 or 40 or 6)
- (7) 20 % of a number =  $\dots\dots\dots$  % of half the same number.  
(10 or 20 or 30 or 40)
- (8) Volume of a cube whose sum of edge lengths of two adjacent faces is 56 cm.  
is  $\dots\dots\dots$  cm<sup>3</sup> (512 or 7 or 8 or 343)
- (9) Parallelogram with equal diagonals in length is called  $\dots\dots\dots$   
( trapezium or rectangle or rhombus or square )
- (10) If the radius length of a circle increases by the ratio 5 % , then the diameter  
length increases by ratio  $\dots\dots\dots$  (5 % or 10 % or 15 % or 5)
- (11) All of the following data are descriptive except  $\dots\dots\dots$   
( address or qualifications or age or birth place )
- (12) A car consumes 4 litres of fuel to cover distance 100 km. , then the rate of  
consumption is  $\dots\dots\dots$  litre per km. (25 or 0.4 or 0.04 or 400)

## 2 Complete :

- (1) In parallelogram ABCD ,  $m(\angle A) + m(\angle C) = 140^\circ$  , then  $m(\angle B) = \dots\dots\dots^\circ$
- (2) The volume of cuboid with dimensions 10 cm. , 8 cm. and 7 cm. =  $\dots\dots\dots$  cm<sup>3</sup>
- (3) Age , birth date and weight are called  $\dots\dots\dots$  data.
- (4)  $1.5 \text{ litre} + 0.35 \text{ dm}^3 + 150 \text{ cm}^3 = \dots\dots\dots$  cm<sup>3</sup>
- (5) If  $A = \frac{1}{2} B$  , then  $B : A = \dots\dots\dots$  %
- (6)   $\dots\dots\dots$  (in the same pattern)
- (7) If the length of an insect is 3 mm. , if its length in the picture is 6 cm. , then  
the ratio of magnification is  $\dots\dots\dots$
- (8) The area of a triangle =  $\dots\dots\dots$



## Final Examinations

**3** Answer the following :

( 1 ) If the number of pupils in a school is 630 pupils , if the ratio between the number of boys and the number of girls is 5 : 4 Find the number of each.

.....

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( 2 ) A map is drawn with scale 1 : 400 000 , if the distance between two cities is 12 km. Find the distance between them on the map.

.....

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.....

.....

( 3 ) A trader bought a TV set by L.E. 4 500 and sold it with profit 10 % Find the selling price.

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.....

( 4 ) A box in a cuboid shape with square base its side length is 40 cm. and height 30 cm. is filled by bars of soaps in a cuboid shape with dimensions 6 cm. , 4 cm. and 5 cm. Find the greatest number of soaps can be put in the box.

.....

.....

.....

.....

( 5 ) The following table shows the number of hours which 50 pupils spend to study their lessons daily :

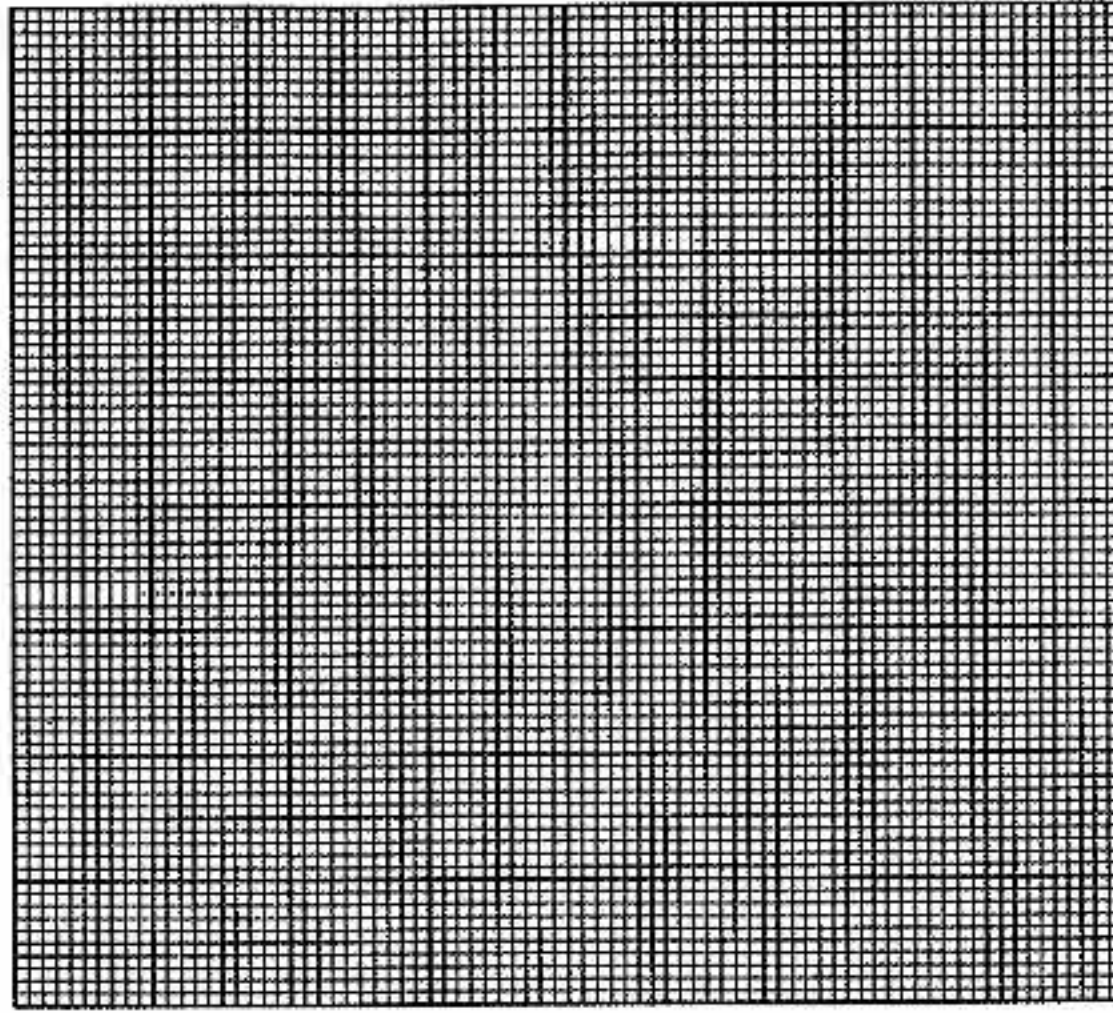
Number of hours	1 –	3 –	5 –	7 –	9 – 11	Total
Number of pupils	6	10	14	12	8	50

Represent these data by using a frequency curve.





## Final Examinations



## 10 Ismailia Governorate

South Ismailia Educational Zone  
Suez Canal Language School

Answer the following questions :

1 Choose the correct answer :

(1) If  $A : B = 2 : 3$  ,  $B : C = 3 : 5$  , then  $A : C = \dots\dots\dots$ 

(2 : 5 or 3 : 6 or 2 : 3 or 5 : 2)

(2) If  $\frac{2}{5} = \frac{x}{15}$  , then  $x = \dots\dots\dots$ 

(2 or 5 or 6 or 15)

(3) The following data are descriptive data except .....

(favorite colour or age or birth place or blood species)

(4) If the number 2 , 7 ,  $x$  and 21 are proportional , then  $x = \dots\dots\dots$ 

(6 or 21 or 12 or 7)

(5) If the real length of a tree is 6 m. and its drawing , length is 3 cm. , then the drawing scale = ..... : .....

(1 : 100 or 1 : 200 or 1 : 300 or 1 : 600)

(6)  $0.3 \text{ m}^3 = \dots\dots\dots \text{ dm}^3$ 

(3 000 or 300 or 30 or 3)

(7) If the volume of a cuboid equals  $315 \text{ cm}^3$  , its base with length 9 cm. and width 7 cm. , then its height = ..... cm.

(7 or 5 or 63 or 45)

(8) The two diagonals are equal in length and perpendicular in .....

(rectangle or rhombus or triangle or square)





## Final Examinations

(9)  $\frac{4}{5} = \dots\dots\dots \%$

(50 or 60 or 70 or 80)

(10) If Hany drinks 21 glasses of milk weekly , then he drinks  $\dots\dots\dots$  glasses of milk every 3 days.

(3 or 6 or 9 or 12)

(11)  $\frac{1}{2}$  kg. : 700 gm. =  $\dots\dots\dots$

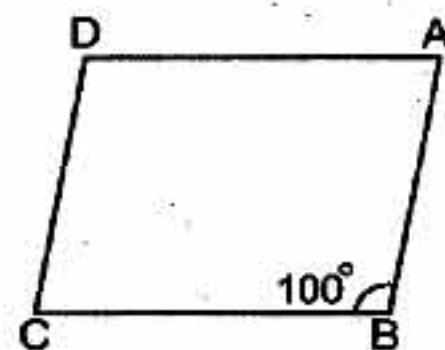
(2 : 7 or  $\frac{7}{8}$  or  $\frac{5}{7}$  or  $\frac{7}{9}$ )

(12) In the opposite figure :

ABCD is a parallelogram , then :

$m(\angle D) = \dots\dots\dots^\circ$

(100 or 60 or 80 or 70)



## 2 Complete :

(1) The range of the set of values 7 , 3 , 6 , 9 and 5 is  $\dots\dots\dots$ (2) If the drawing scale  $< 1$  , then this expresses  $\dots\dots\dots$ (3) A cuboid of dimensions 5 cm. , 6 cm. and 2 cm. , its volume is  $\dots\dots\dots$  cm<sup>3</sup>

(4)  $1.5 \text{ litres} + 0.5 \text{ dm}^3 + 500 \text{ cm}^3 = \dots\dots\dots$  litres.

(5)  $1 - (15\% + 45\%) = \dots\dots\dots \%$

(6)  $\frac{1}{4} : \frac{1}{3} : \frac{1}{2} = \dots\dots\dots : \dots\dots\dots : \dots\dots\dots$  (in the simplest form)

(7) The number of pupils in a primary school is 360 pupils , if the ratio between the number of boys and the number of girls is 1 : 2 , then the number of boys =  $\dots\dots\dots$ (8) If the edge length of a cube = 4 cm. , then the volume =  $\dots\dots\dots$  cm<sup>3</sup>

## 3 Answer the following :

(1) If the buying price of electric sets is L.E. 72 000 and sold at 12 % profit. Calculate the selling price.

.....

.....

.....

.....



## Final Examinations

- ( 2 ) Three persons started a business , the first paid 15 000 pounds , the second paid 25 000 pounds and the third paid 20 000 pounds , at the end of the year the profit was 5 520 pounds. Calculate the share of each of them.

.....

.....

.....

.....

.....

.....

- ( 3 ) 10 litres of water were poured in a vessel in the shape of a cuboid its base is a square base of side length 25 cm. Find height of the water in the vessel.

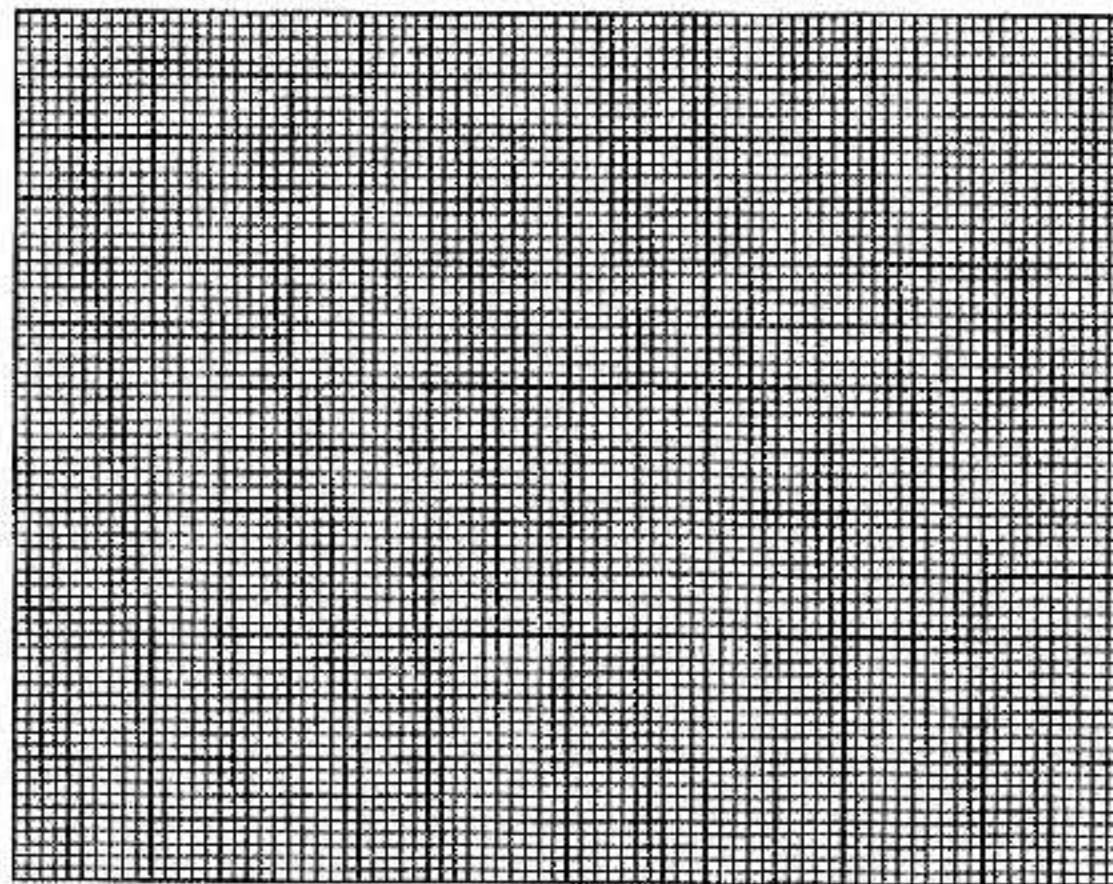
.....

.....

- ( 4 ) The following table shows of money in pounds paid by a group of contributors in a charity :

The sum	50 –	60 –	70 –	80 –	90 –	100 –
Number of contributors	5	7	10	12	10	7

Draw the frequency curve of this distribution.





## 11 Suez Governorate

South Educational Directorate  
Maths Inspection

Answer the following questions :

1 Choose the correct answer :

- (1)  $\frac{2}{5} : \frac{7}{2} = \dots\dots\dots$  ( 5 : 7 or 4 : 35 or 2 : 7 or 5 : 2 )
- (2) In the parallelogram , the sum of the measures of any two consecutive angles =  $\dots\dots\dots^\circ$  ( 45 or 90 or 180 or 360 )
- (3) The percentage is a ratio its second term is  $\dots\dots\dots$  ( 10 or 100 or 200 or 1 000 )
- (4) 39 days  $\approx \dots\dots\dots$  weeks. ( 4 or 5 or 6 or 7 )
- (5) The ratio between the length of the side of the equilateral triangle and its perimeter =  $\dots\dots\dots$  ( 1 : 3 or 3 : 1 or 4 : 1 or 1 : 4 )
- (6) Cuboid of dimensions (5 cm. , 2 cm. , 7 cm.) , its volume =  $\dots\dots\dots \text{cm}^3$  ( 24 or 48 or 65 or 70 )
- (7) The following data are descriptive data except  $\dots\dots\dots$  ( favorite colour or birth place or age or blood species )
- (8) If  $\frac{x}{5} = 40\%$  , then  $x = \dots\dots\dots$  ( 2 or 4 or 5 or 8 )
- (9)  $3 \text{ m}^3 = \dots\dots\dots$  litres. ( 300 or 3 000 or 300 000 or 3 000 000 )
- (10)  $\frac{3}{4} = \dots\dots\dots\%$  ( 25 or 50 or 57 or 75 )
- (11) An iron with price L.E. 120 at 20 % discount , the price after discount = L.E.  $\dots\dots\dots$  ( 90 or 96 or 100 or 140 )
- (12) If the length of an insect in the picture is 4 cm. and its real length is 2 mm. , the drawing scale is  $\dots\dots\dots$  ( 2 : 1 or 1 : 2 or 20 : 1 or 1 : 20 )

2 Complete the following :

- (1) Half km. : 250 metres =  $\dots\dots\dots$  (in the simplest form)
- (2) The range of the set of values 7 , 3 , 6 , 9 and 5 is  $\dots\dots\dots$
- (3) If  $A : B = 3 : 4$  ,  $B : C = 4 : 5$  , then  $A : C = \dots\dots\dots$
- (4) The drawing scale =  $\frac{\dots\dots\dots}{\text{The real length}}$





## Final Examinations

- (5) The two diagonals are equal in length in each of ..... , .....
- (6) 6 , 8 , 3 , ..... (Complete the missing number to be proportional)
- (7)  $\frac{1}{2} : \frac{1}{3} = \dots : \dots$  (in the simplest form)
- (8) Cuboid of volume is  $1\,400\text{ cm}^3$  , its height is 14 cm. , the area of its base = .....  $\text{cm}^2$

## 3 Answer the following questions :

- (1) Hassan spends L.E. 45 within 3 days , what is the rate of what Hassan spends per day ?  
.....
- (2) A vessel in the shape of a cube with edge length 30 cm. is filled with honey. Calculate the capacity of the vessel.  
.....  
.....
- (3) In one of our schools , there are 560 students , if the number of girls is  $\frac{3}{5}$  the number of boys. Find each of the number of boys and girls.  
.....  
.....  
.....

## (4) In the opposite figure :

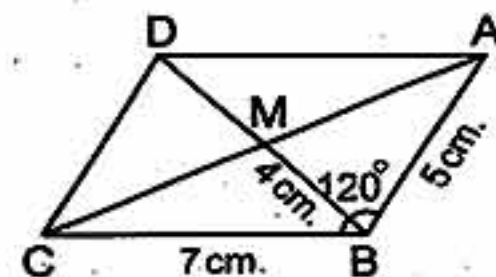
ABCD is a parallelogram in which

AB = 5 cm. , BC = 7 cm.

BM = 4 cm. ,  $m(\angle ABC) = 120^\circ$

Without using geometrical instruments

, find  $m(\angle ADC)$  and the perimeter of  $\Delta BCD$

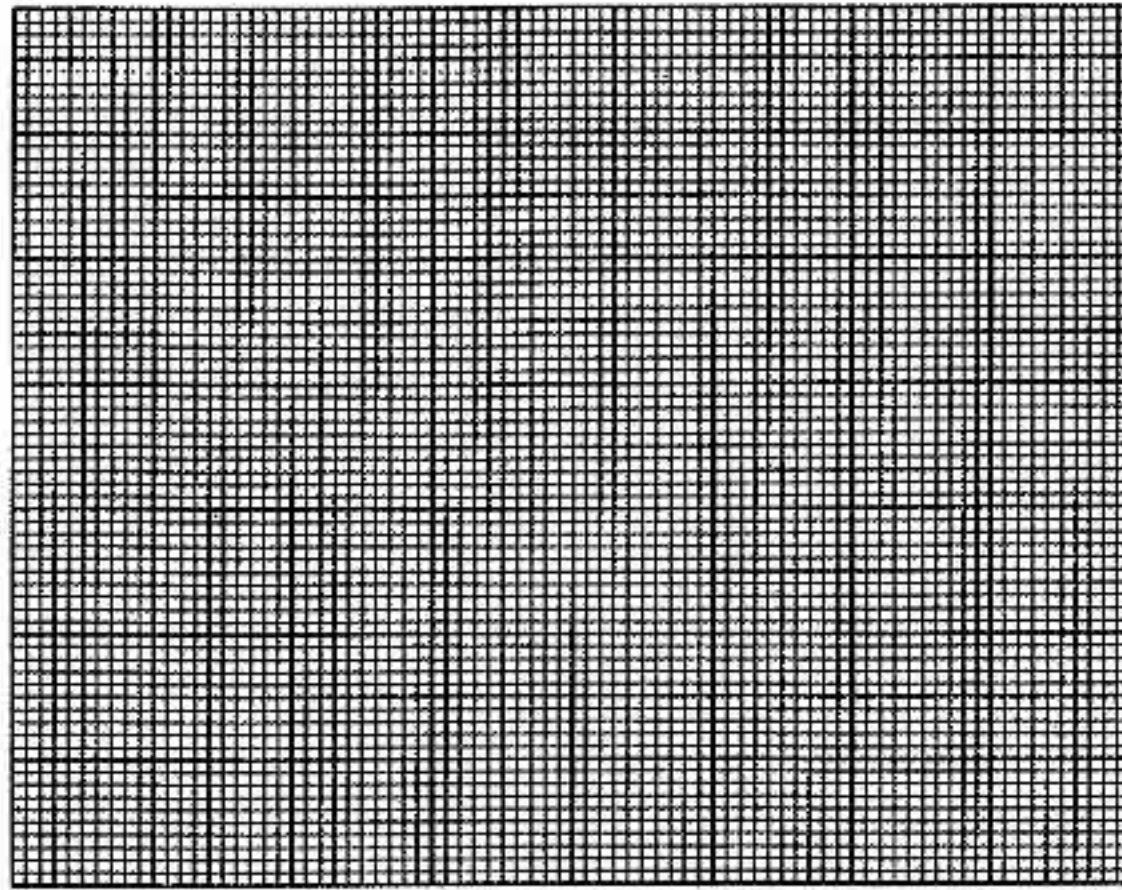


- (5) The following table shows the number of hours which the pupils of a class spend daily in front of the computer :

Number of hours	- 1	- 2	- 3	- 4	- 5	- 6	Total
Number of pupils	8	10	12	6	4	2	42

Represent these data by a frequency curve.





## 12 Port Said Governorate

Maths Inspector



Answer the following questions :

1 Choose the correct answer :

- (1)  $\frac{2}{3} : 3 \frac{1}{3} = \dots\dots\dots$  ( 1:2 or 1:3 or 2:3 or 1:5 )
- (2) The centimetre cube is a unit of measuring the .....  
( length or area or volume or weight )
- (3) 18 kirats : 2 feddans = ..... ( 1:2 or 3:8 or 1:24 or 18:2 )
- (4) If Heba bought a mobile phone for 900 pounds with a discount 10 % , then the price of the mobile phone before the discount is ..... pounds.  
( 9 000 or 1 000 or 990 or 100 )
- (5) If the drawing scale  $< 1$  , this expresses .....  
( equality or maximization or enlargement or minimization )
- (6) A wooden box in the form of a cube , its external volume is  $1\,000\text{ cm}^3$  and its capacity is  $729\text{ cm}^3$  , then the volume of wood of the box = .....  $\text{cm}^3$   
( 0.729 or 1 729 or 271 or 729 000 )
- (7) The diagonals are perpendicular in .....  
( rectangle or trapezoid or rhombus or parallelogram )
- (8) The ratio between the side length of the square to its perimeter is .....  
( 1:2 or 1:3 or 4:1 or 1:4 )





## Final Examinations

- ( 9 ) If the ratio among the measurements of the angles of a triangle is 1 : 2 : 3 , then the measurement of the smallest angle is ..... °  
( 10 or 20 or 30 or 60 )
- (10)  $1 \frac{3}{4} = \dots\dots\dots \%$  ( 25 or 50 or 75 or 175 )
- (11) If one angle of parallelogram is right , then it is called .....  
( rectangle or trapezoid or rhombus or rhombus )
- (12) The following data are descriptive data except .....  
( age or birth place or blood species or favourite colour )

## 2 Complete the following :

- ( 1 ) The range of the set of values 8 , 1 , 9 , 11 and 7 is .....
- ( 2 ) The agricultural tractor ploughs 28 feddans in 4 hours , then the time which needed to plough 42 feddans is ..... hours.
- ( 3 ) If the height of the fence of the villa in the design is 5 cm. and its real height is 5 metres , then the drawing scale is ..... : .....
- ( 4 ) 5 000 grams : 8 kilograms = ..... : ..... (in the simplest form).
- ( 5 ) If  $A : B = 1 : 2$  ,  $B : C = 2 : 5$  , then  $A : C = \dots\dots\dots$  : .....
- ( 6 ) A cube of edge length 5 cm. , then its volume = .....  $\text{cm}^3$
- ( 7 ) If  $\frac{2}{5} = \frac{x}{20}$  , then  $x = \dots\dots\dots$
- ( 8 ) If the volume of a cuboid is  $64 \text{ cm}^3$  and the area of its base is  $16 \text{ cm}^2$  , then its height = ..... cm.

## 3 Answer the following :

- ( 1 ) In the opposite figure :

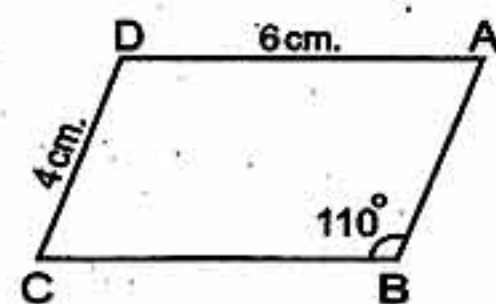
ABCD is a parallelogram , find :

[a]  $m(\angle D)$

[b]  $m(\angle A)$

[c] The length of  $\overline{AB}$

[d] The perimeter of the shape ABCD





## Final Examinations

- ( 2 ) If the buying price of electric sets is L.E. 72 000 and sold at 15 % profit.  
Calculate the selling price.

.....

.....

- ( 3 ) A cuboid tin with inner dimensions 2 dm. , 3 dm. and 4 dm. was full of honey.  
Calculate the price of honey , given that the price of one litre is L.E. 20

.....

.....

- ( 4 ) In one of our schools , there are 1 000 students , if the ratio between the  
number of boys and the number of girls is 2 : 3 , find each of the number of  
boys and girls.

.....

.....

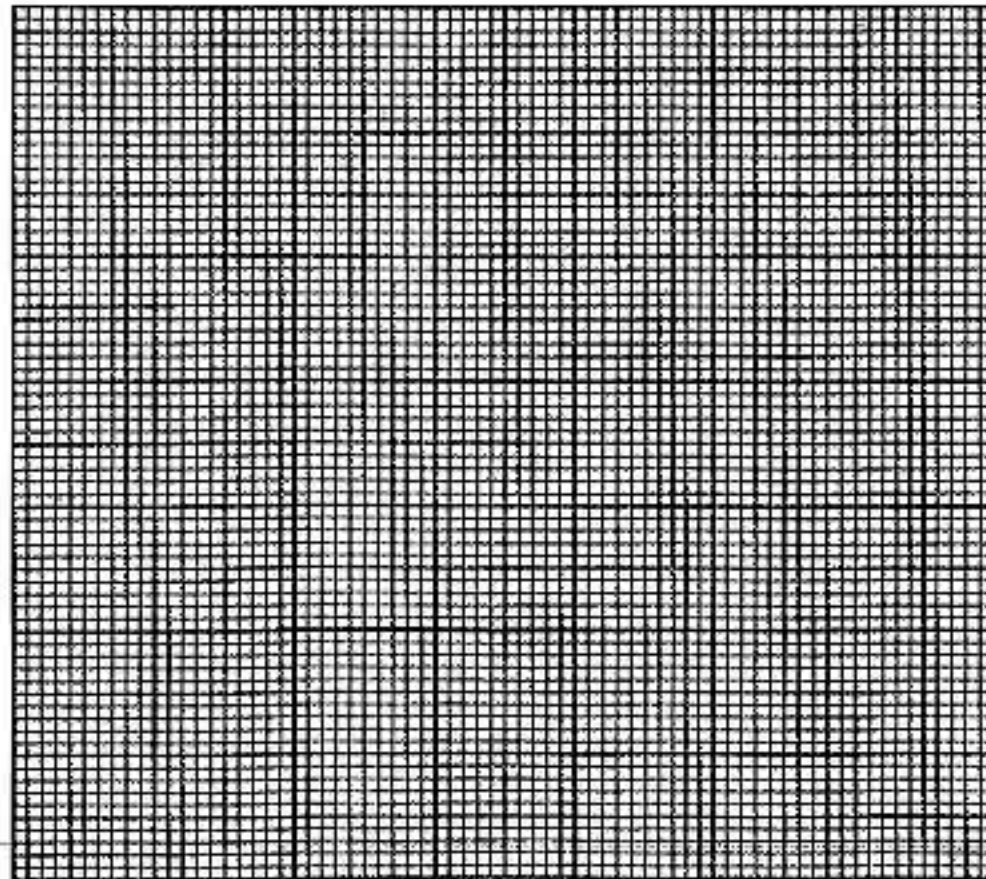
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- ( 5 ) The following table shows the marks of 50 students in one month in maths :

Marks	10 –	20 –	30 –	40 – 50	Total
Number of students	6	10	20	14	50

Represent these data by the frequency curve.





## 13 Kafr El-Sheikh Governorate

Maths Inspection



Answer the following questions :

1 Choose the correct answer between brackets :

- (1) If the values in the frequency distribution lies between (40 , 90) , then the range of this distribution = ..... ( 130 or 50 or 80 or 180 )
- (2) If 5 , 6 ,  $x$  and 12 are proportional numbers , then  $x$  = ..... ( 8 or 12 or 5 or 10 )
- (3) An agricultural machine ploughs 17 feddans in 8.5 hours , then the rate of performance of the machine = ..... feddans/hour ( 2 or 4 or 2.5 or 4.5 )
- (4) If  $a : b = 50\%$  and  $b : c = 2 : 3$  , then  $a : c =$  ..... ( 1 : 2 or 2 : 3 or 2 : 6 or 3 : 1 )
- (5) If the volume of a cuboid equals  $360 \text{ cm}^3$  , its length is 9 cm. and its width is 8 cm. , then its height = ..... cm. ( 5 or 40 or 48 or 72 )
- (6) If one angle of the parallelogram is right angle , and has two adjacent sides are equal in length , then it is called ..... ( trapezium or square or rectangle or rhombus )
- (7) The ratio between the side length of the square and its perimeter = ..... ( 4 : 1 or 1 : 4 or 1 : 3 or 1 : 6 )
- (8) If the drawing scale  $< 1$  , then it expresses ..... ( enlargement or congruency or reduction or equivalent )
- (9)  $4.250 \text{ cm}^3 =$  .....  $\text{mm}^3$  ( 4 250 or 42.5 or 0.425 or 4.25 )
- (10)  $3 \frac{4}{7} : 3 \frac{1}{8} =$  ..... ( 7 : 8 or 8 : 7 or 1 : 4 or 1 : 1 )
- (11) If the price of some goods is L.E. 256 and if the price became L.E. 192 during the discount , then the percentage of the discount equals ..... ( 16 % or 75 % or 33 % or 25 % )
- (12) ABCD is a parallelogram , then  $m(\angle A) + m(\angle B) =$  ..... ° ( 90 or 108 or 180 or 360 )





## Final Examinations

## 2 Complete each of the following :

(13) Emad sold a flat with profit 5 % , if his profit was L.E. 7 500 , then the selling price of the flat is L.E. ....

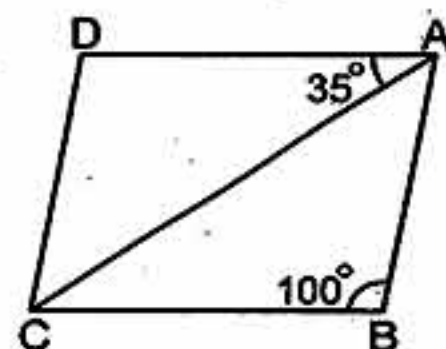
(14)  $32 \% + 27 \% + \dots \% = 1$

(15)  $\frac{1}{2} : \frac{1}{3} : \frac{1}{4} = \dots : \dots : \dots$  (in the simplest form)

(16) In the opposite figure :

ABCD is a parallelogram , then

$m(\angle ACD) = \dots^\circ$



(17) If the drawing scale is 1 : 500 000 and a road of real length 12.5 km. , then the length of the road on the map is ..... cm.

(18) The volume of a cuboid is  $64 \text{ cm}^3$  and the area of its base is  $16 \text{ cm}^2$  , then its height = ..... cm.

(19) The following figure in the pattern  is .....

(20) The following table shows the marks of 40 students in a test , then the number of students who got less than 30 marks = .....

Marks	10 –	20 –	30 – 40
Number of students	10	13	17

## 3 Answer the following :

(21) A cube of cheese with edge length 15 cm. , it is wanted to divide it into small cuboids each of dimensions 3 cm. , 5 cm. and 1 cm. Find the number of resulting small cuboids of cheese.

.....  
 .....  
 .....

(22) The ratio between the measures of two consecutive angles in a parallelogram is 4 : 5 Find the measure of each of them.

.....  
 .....  
 .....  
 .....



## Final Examinations

- (23) Three persons shared in a business , the first paid L.E. 60 000 , the second paid L.E. 80 000 and the third paid L.E. 90 000 At the end of the year the profit was L.E. 20 700 Find the share of each one.

.....

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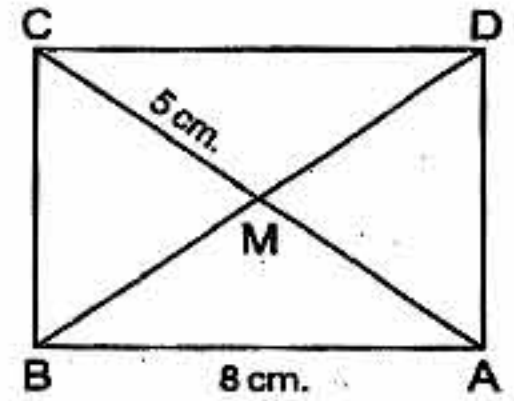
.....

- (24) In the opposite figure :

ABCD is a rectangle in which  $AB = 8 \text{ cm}$ .

and  $MC = 5 \text{ cm}$ . Find :

- [a] Length of  $\overline{AM}$       [b] Length of  $\overline{DB}$   
[c] Perimeter of  $\triangle AMB$



.....

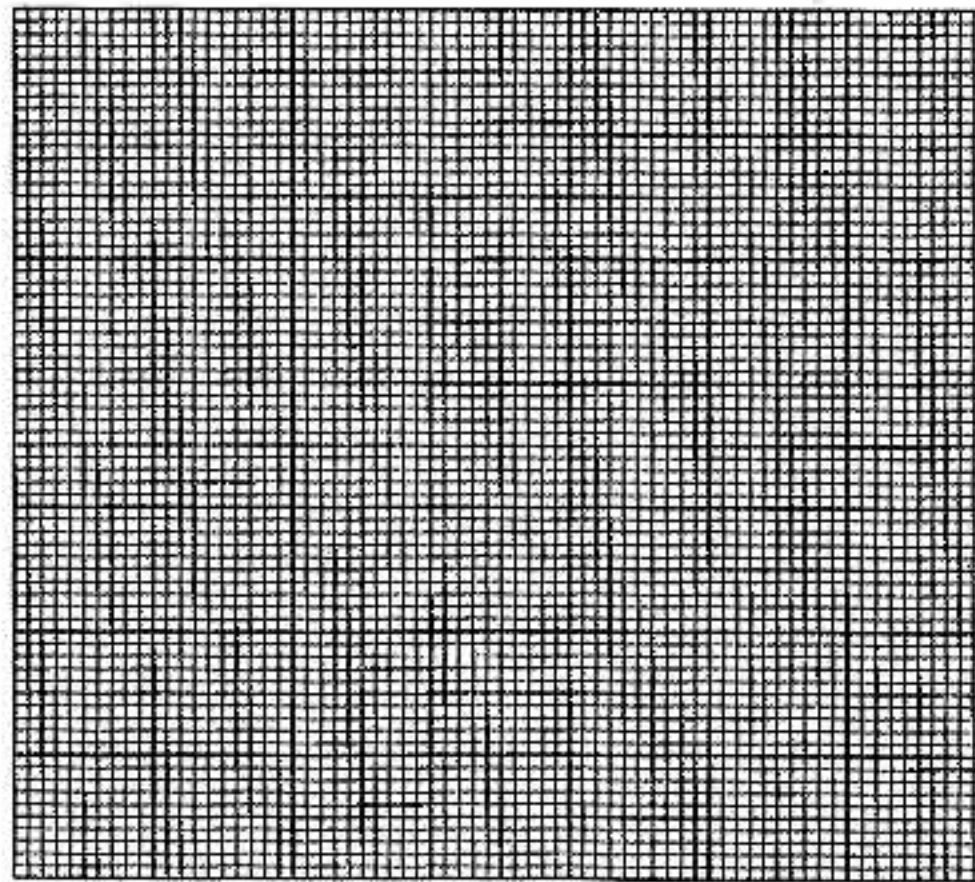
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- (25) The following table shows the marks of 30 pupils in mathematics :

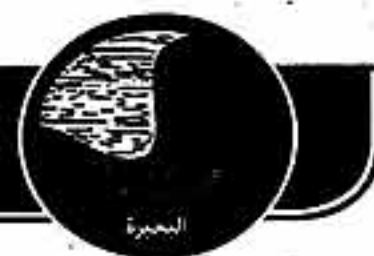
Marks	10 –	20 –	30 –	40 –	Total
Number of students	5	7	10	8	30

Draw the frequency curve for this distribution.





## 14 El-Beheira Governorate

Rashid Educational Zone  
Rashid Language School

Answer the following questions :

1 Choose the correct answer :

(1)  $1 \frac{3}{4} = \dots\dots\dots \%$  (25 or 50 or 75 or 175)

(2) If 6 , 8 , 3 and  $x$  are proportional numbers , then  $x = \dots\dots\dots$   
(2 or 4 or 18 or 24)

(3)  $6\,500\text{ dm}^3 = \dots\dots\dots \text{ m}^3$  (6.5 or 65 or 605 or 650)

(4)  $\frac{1}{2} : \frac{1}{3} = \dots\dots\dots : \dots\dots\dots$  (1:1 or 2:3 or 3:2 or 3:1)

(5) The ratio between the side length of the square and its perimeter  
 $= \dots\dots\dots : \dots\dots\dots$  (1:1 or 1:3 or 1:4 or 4:1)

(6) The diagonals are perpendicular and equal in length in .....  
(parallelogram or rectangle or rhombus or square)

(7) If the height of the fence of the villa in the design is 5 cm. and its real height  
is 5 metres , then the drawing scale is ..... : .....  
(1:1 or 1:10 or 1:100 or 1:1 000)

(8) The percentage is a ratio which its second term is .....  
(10 or 100 or 1 000 or 0.01)

(9) The volume of a cube of edge length 3 cm. = .....  $\text{cm}^3$   
(8 or 27 or 64 or 125)

(10) If  $a : b = 2 : 3$  and  $b : c = 3 : 5$  , then  $a : c = \dots\dots\dots : \dots\dots\dots$   
(2:5 or 3:5 or 5:2 or 5:3)

(11) If the ratio between the weight of Hani and the weight of Ahmed is 5 : 6 and  
the weight of Ahmed is 60 kg. , then the weight of Hani = ..... kg.  
(40 or 50 or 60 or 10)


(12) The opposite data are quantitative data except .....  
(weight or age or temperature degrees or blood species)





## Final Examinations

## 2 Complete the following :

- (13) The proportion is .....
- (14) 3 000 gm. : 5 kg. = ..... : ..... (in the simplest form)
- (15) If the drawing scale  $< 1$  , then this expresses .....
- (16) The following figure in this pattern  is .....
- (17) The volume of a cuboid with a squared base of side length 6 cm. and its height is 10 cm. = .....  $\text{cm}^3$
- (18) If the percentage of the number of girls in a class which mixed is 67 % , then the percentage of the number of boys in this class = .....
- (19) A computer colour printer prints 12 papers each 4 minutes , then the rate of work of this printer = ..... papers/minutes
- (20) The range of the set of values 7 , 3 , 6 , 9 and 5 is .....

## 3 Answer the following :

- (21) A primary school has 540 pupils. If the ratio between the number of boys to the number of girls is 4 : 5 , calculate the number of each boys and girls.

.....

.....

.....

.....

.....

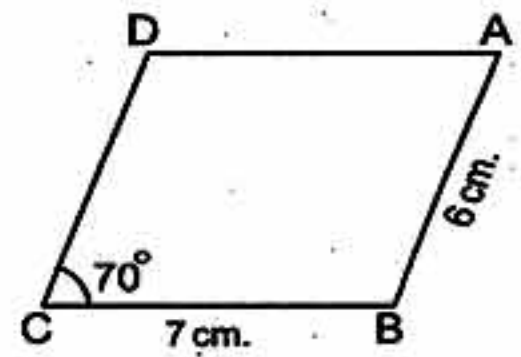
## (22) In the opposite figure :

ABCD is a parallelogram in which  $AB = 6 \text{ cm}$  ,  $BC = 7 \text{ cm}$ . and  $m(\angle C) = 70^\circ$

Find :

[a]  $m(\angle D) = \dots\dots\dots$

[b]  $AD = \dots\dots\dots \text{ cm}$ .



- (23) A company for selling the electric sets. It shows TV set for L.E. 2 100 , if the percentage of the profit is 12 % Find the buying price of TV set.

.....

.....

.....

.....



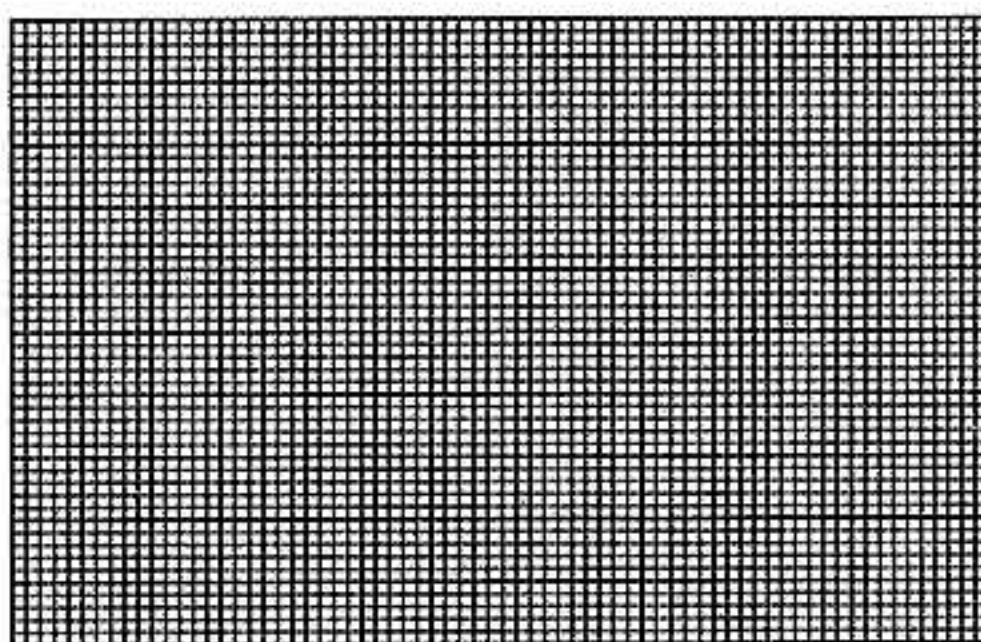
## Final Examinations

- (24) A container has 12 litres of honey. It is wanted to put them in smaller bottles , the capacity of each of them is  $400 \text{ cm}^3$ . Calculate the number of bottles which is needed for that.
- .....
- .....

- (25) The following table shows the marks of students in one month in math :

Marks	10 –	20 –	30 –	40 – 50	Total
Numbers of students	5	15	20	10	50

Represent these data using the frequency curve.



## 15 El-Menia Governorate

El-Menia Educational Zone  
Kafr El-Mansorah Formal Languages Primary School



Answer the following questions :

- 1 Choose the correct answer :

- (1) If  $3a = 4b$ , then  $\frac{a}{b} = \dots\dots\dots$  ( $\frac{3}{4}$  or  $\frac{2}{3}$  or  $\frac{4}{3}$  or  $\frac{3}{2}$ )
- (2) If  $\frac{4}{6} = \frac{12}{x}$ , then  $x + 2 = \dots\dots\dots$  (16 or 18 or 20 or 22)
- (3) 300 grams :  $1\frac{1}{2}$  kilogram =  $\dots\dots\dots$  :  $\dots\dots\dots$   
(1 : 3 or 1 : 5 or 10 : 1 or 10 : 30)
- (4)  $1 - (35\% + 25\%) = \dots\dots\dots$  ( $\frac{1}{2}$  or  $\frac{1}{3}$  or  $\frac{2}{5}$  or  $\frac{3}{4}$ )
- (5) The ratio between the circumference of the circle and its diameter length is  $\dots\dots\dots$  ( $\frac{\pi}{2}$  or  $\pi$  or  $\frac{1}{\pi}$  or  $2\pi$ )
- (6)  $300 \text{ cm}^3 + 3.7 \text{ litres} = \dots\dots\dots \text{ litres}$  (6.7 or 4 or 3.6 or 303.7)
- (7) An agricultural machine ploughs 6 feddans in 3 hours, then the rate of performance of the machine is  $\dots\dots\dots$  feddans/hour  
(2 or 15 or 3 or 25)





## Final Examinations

(8)  $\frac{1}{6} : 3 \frac{1}{3}$  in the simplest form is .....

( 1 : 20 or 2 : 15 or 2 : 5 or 1 : 5 )

(9) If the volume of a cuboid =  $40 \text{ cm}^3$ , and its height = 4 cm. , then the area of its base = ..... ( 10 cm. or  $10 \text{ cm}^2$  or  $160 \text{ cm}^2$  or 160 cm. )

(10) The sum of measure of two consecutive angles in a parallelogram = ..... (  $60^\circ$  or  $90^\circ$  or  $180^\circ$  or  $360^\circ$  )

(11) The two diagonals are equal in length and not perpendicular in ..... ( rectangle or rhombus or triangle or square )

(12) The following data are descriptive except ..... ( favourite colour or age or birth place or name )

## 2 Complete the following statements :

(1) If the real length of an insect is 0.3 mm. and its length in a picture is 4.5 cm. , then the drawing scale = ..... : .....

(2)  $\frac{3}{10} = \dots\dots\dots \%$

(3) The ratio between 3 feddans : 40 kirats = ..... : .....

(4) If  $A : B = 2 : 3$  ,  $B : C = 3 : 5$  , then  $A : C = \dots\dots\dots$  (in the simplest form)

(5) 39 days  $\approx$  ..... week. (to the nearest week)

(6) The sum of all edges of a cube is 24 cm. , then its volume = .....  $\text{cm}^3$

(7)  $\triangle \bigcirc \triangle \triangle \bigcirc \bigcirc \triangle \triangle \triangle$  ..... (in the same pattern)

(8) The range of the set of values 7 , 3 , 6 , 9 and 5 is .....

## 3 Answer the following questions :

(1) If the buying price of electric sets is L.E. 72 000 and sold at 12 % profit Calculate the selling price.

.....  
.....  
.....

(2) If the ratio among the measures of the angles of a triangle is 2 : 3 : 4 Find the measure of the greatest angle in this triangle.

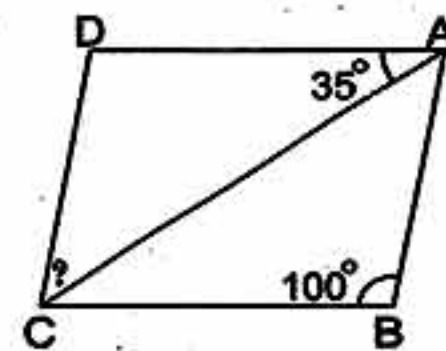
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## Final Examinations

( 3 ) In the opposite figure :

ABCD is a parallelogram in which  
 $m(\angle B) = 100^\circ$  ,  $m(\angle DAC) = 35^\circ$   
 Find :  $m(\angle ACD)$

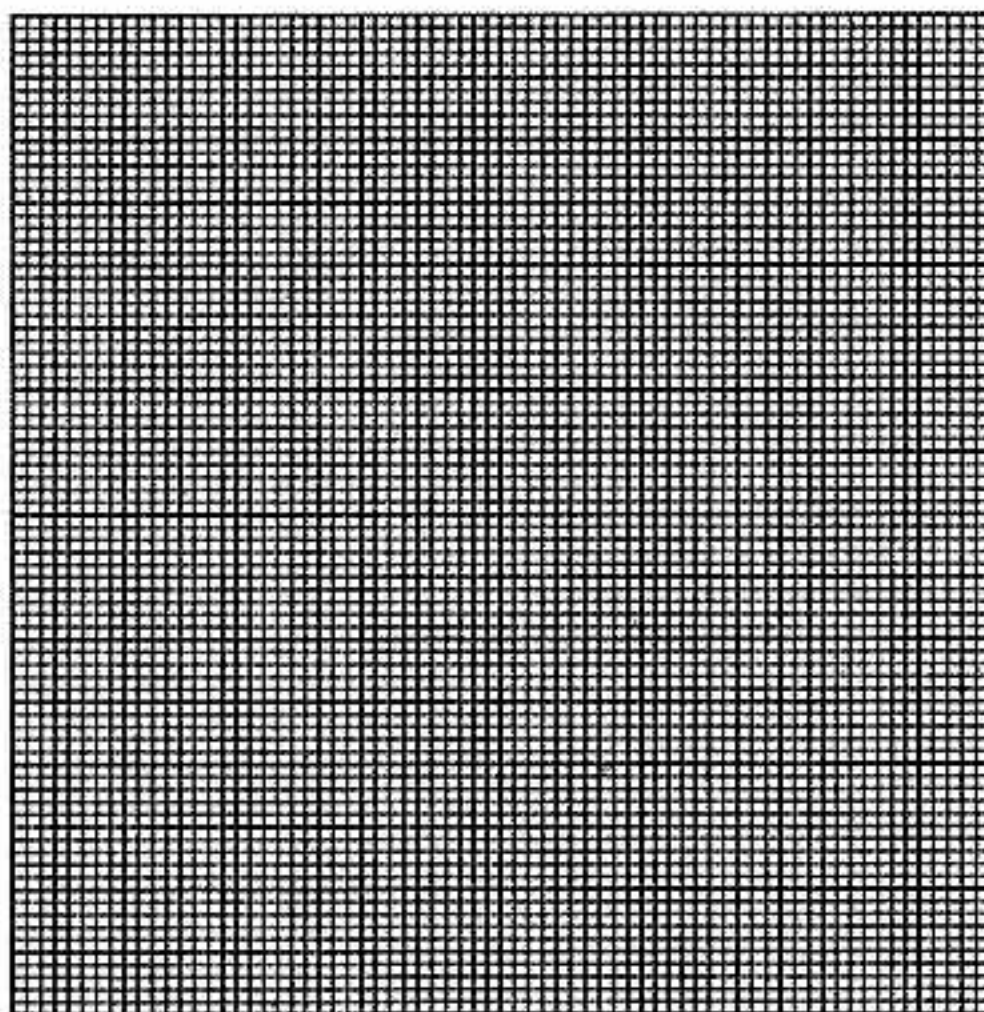


( 4 ) A cuboid tin with inner dimensions 2 dm. , 3 dm. and 4 dm. was full of honey.  
 Calculate the price of honey , given that the price of one litre is L.E. 20

( 5 ) The following table shows the marks of 100 students in one month in math test :

Marks	10 –	20 –	30 –	40 – 50	Total
Number of students	15	30	40	15	100

Draw the frequency curve of this distribution.



## 16 Souhag Governorate

Maths Supervision



Answer the following questions :

1 Choose the correct answer :

( 1 ) If  $a : b = 2 : 3$  ,  $b : c = 6 : 7$  , then  $a : c = \dots\dots\dots$

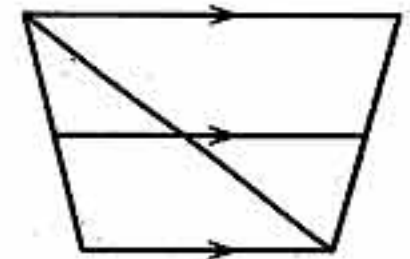
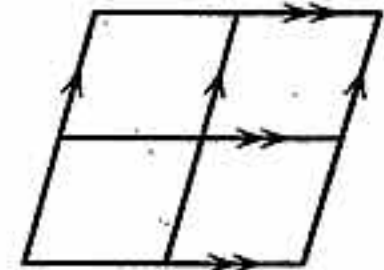
( 7 : 4 or 4 : 7 or 12 : 7 or 6 : 7 )





## Final Examinations

- (2) The range of the values 7 , 3 , 6 , 15 and 10 is .....  
( 4 or 7 or 12 or 15 )
- (3) If  $\frac{x}{9} = \frac{4}{3}$  , then  $x + 2 =$  .....  
( 12 or 14 or 16 or 20 )
- (4)  $1 - (35 \% + 25 \%) =$  .....  
(  $\frac{1}{2}$  or  $\frac{1}{3}$  or  $\frac{2}{5}$  or  $\frac{3}{4}$  )
- (5) The ratio between 3 feddans : 24 kirats = .....  
( 3 : 2 or 3 : 1 or 1 : 8 or 1 : 4 )
- (6) The number of parallelograms in the opposite figure is .....  
( 9 or 7 or 5 or 4 )
- (7) If the volume of a cuboid =  $300 \text{ cm}^3$  , its base area =  $25 \text{ cm}^2$  , then its height = ..... cm.  
( 12 or 13 or 14 or 15 )
- (8)  $250 \text{ gm.} : \frac{1}{2} \text{ kg.} =$  .....  
( 2 : 1 or 1 : 2 or 1 : 5 or 5 : 1 )
- (9) A cube of volume  $125 \text{ cm}^3$  , then the area of its base = .....  
(  $25 \text{ cm}^2$  or 25 cm. or  $5 \text{ cm}^2$  or 5 cm. )
- (10) The following data are descriptive except the .....  
( favourite colour or birth place or age or blood species )
- (11) In the opposite figure :  
The number of trapezoids is .....  
( 2 or 4 or 3 or 5 )
- (12)  $23 \text{ cm}^3 =$  ..... litres.  
( 0.23 or 2 300 or 0.023 or 230 )



## 2 Complete each of the following :

- (1)  $\frac{1}{4} : \frac{1}{3} : \frac{1}{2} =$  ..... : ..... : ..... (in the simplest form)
- (2) If the drawing scale  $> 1$  , then this expresses .....
- (3)  $\triangle \bigcirc \triangle \triangle \bigcirc \bigcirc \triangle \triangle \triangle$  ..... (in the same pattern)
- (4) The difference between the maximum value and the minimum value is called .....
- (5) The number of edges of a cube = ..... edges.
- (6) Area of the square = side length  $\times$  .....
- (7)  $300 \text{ mm}^3 =$  .....  $\text{cm}^3$
- (8) From the properties of the proportion , the product of the extremes = the product of the .....



**3 Answer the following questions :**

- ( 1 ) A metallic cube of edge length 12 cm. , it needs to be converted it into ingots in the shape of cuboid each of them of dimensiona 3 cm. , 4 cm. and 6 cm. Calculate the number of ingots that are obtained.

- ( 2 ) The ratio among the lengths of the sides of a triangle is 2 : 3 : 4 and the preimeter of the triangle = 36 cm. Calculate the length of each side of the triangle.

**( 3 ) In the opposite figure :**

ABCD is a parallelogram in which

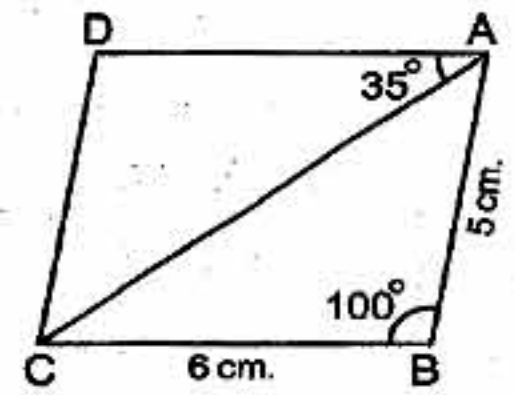
AB = 5 cm. , BC = 6 cm.  $m(\angle B) = 100^\circ$

and  $m(\angle DAC) = 35^\circ$  , without using measuring tools , find :

[a]  $m(\angle D) = \dots\dots\dots^\circ$

[b]  $m(\angle ACD) = \dots\dots\dots^\circ$

[c] The perimeter of the parallelogram ABCD =  $\dots\dots\dots$  cm.



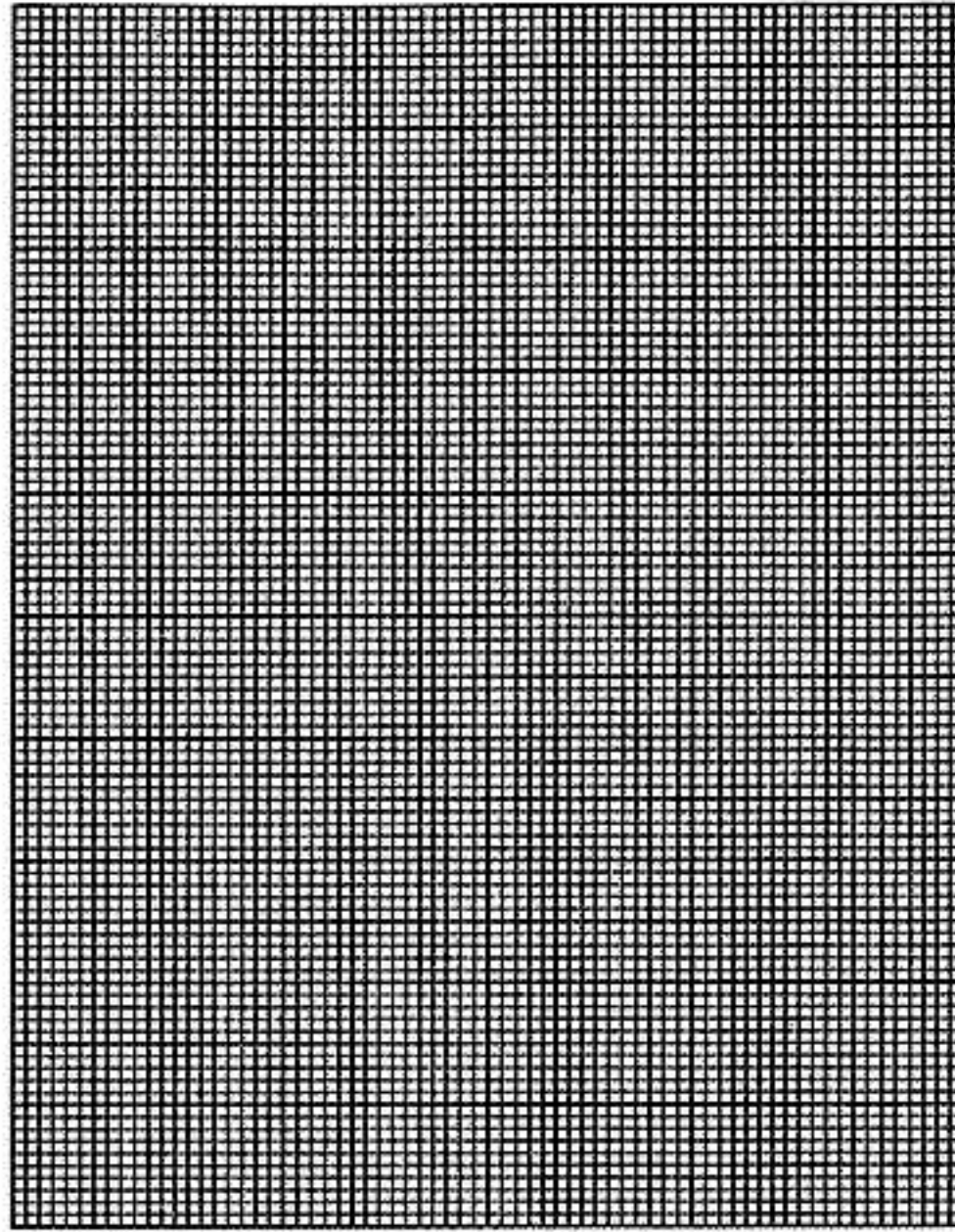
- ( 4 ) The following table shows the ages of visitors to a museum during a certain period :

Visitor's age	10 –	20 –	30 –	40 –	50 –	Total
Frequency	7	10	15	20	13	65

Draw the frequency curve for this distribution.



## Final Examinations



## 17 Qena Governorate

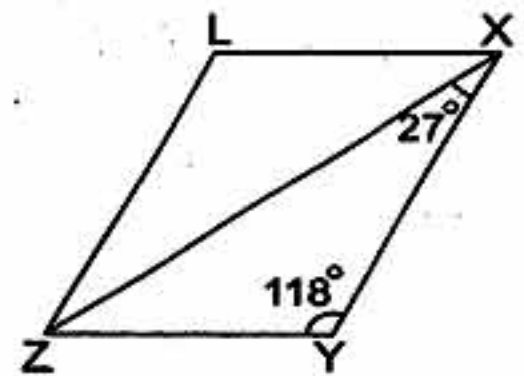
Maths Supervision



Answer the following questions :

## 1 Complete each of the following :

- (1) 30 days  $\approx$  ..... weeks. (to the nearest week)
- (2)  $1 \frac{3}{4} =$  ..... %
- (3) If the volume of a cuboid is  $64 \text{ cm}^3$  and the area of its base is  $16 \text{ cm}^2$ , then the height = ..... cm.
- (4) If  $x$ , 18, 6 and 9 are proportional quantities, then  $x =$  .....
- (5) If  $a : b = 2 : 3$  and  $b : c = 3 : 5$ , then  $a : c =$  .....
- (6) If the marks of 6 pupils in one test are 29, 33, 57, 40, 36, 49, then the range of these marks = .....
- (7) In the opposite figure :  
XYZL is a parallelogram in which  
 $m(\angle Y) = 118^\circ$  and  $m(\angle YXZ) = 27^\circ$ , then :  
[a]  $m(\angle L) =$  .....  
[b]  $m(\angle LXZ) =$  .....
- (8) The area of the triangle =  $\frac{1}{2} \times$  .....  $\times$  .....





## 2 Choose the correct answer from those given :

- (9) The opposite data are descriptive except .....  
( The favorite colour **or** birthday **or** age **or** blood species )
- (10) 4.6 litres = ..... mL. ( 46 **or** 460 **or** 4 600 **or** 46 000 )
- (11)  $\frac{2}{3} : 3 \frac{1}{3} = \dots\dots\dots : \dots\dots\dots$  ( 1:2 **or** 2:5 **or** 1:10 **or** 1:5 )
- (12) The volume of the cuboid whose dimensions are 2 cm. , 3 cm. , 5 cm..  
= ..... cm<sup>3</sup> ( 10 **or** 25 **or** 30 **or** 50 )
- (13) The centimetre cube is a unit for measuring .....  
( the perimeter **or** the area **or** the volume **or** the length )
- (14) If one of the angles of a parallelogram is right and two of its adjacent sides are equal in length , then it is called .....  
( rhombus **or** square **or** triangle **or** rectangle )
- (15) The drawing scale =  $\frac{\dots\dots\dots}{\dots\dots\dots}$   
(  $\frac{\text{length in reality}}{\text{length in drawing}}$  **or**  $\frac{1}{\text{length in reality}}$  **or**  $\frac{\text{length in drawing}}{\text{length in reality}}$  **or**  $\frac{1}{2}$  )
- (16) A tractor ploughs 28 feddans in 4 hours , then the time which is needed to plough 42 feddans = ..... hours. ( 4 **or** 6 **or** 7 **or** 8 )
- (17)  $\frac{3}{4} = \dots\dots\dots$  (as a decimal fraction) ( 0.2 **or** 0.5 **or** 0.25 **or** 0.75 )
- (18) 45 % = ..... (as a fraction in the simplest form)  
(  $\frac{45}{1\,000}$  **or**  $\frac{9}{20}$  **or**  $\frac{4}{10}$  **or**  $\frac{5}{100}$  )
- (19) The ratio between 12 kirats and 2 feddans = ..... : .....  
( 1:4 **or** 4:1 **or** 1:6 **or** 6:1 )
- (20) If a man distributed L.E. 200 among his three sons in the ratio 2 : 3 : 5 , then the share of the third = L.E. ....  
( 50 **or** 100 **or** 150 **or** 75 )

## 3 Answer the following :

- (21) A cube of metal its edge length is 12 cm. If it is wanted to be melted down and converted into alloys in the form of a cuboid with dimensions 3 cm. , 4 cm. , and 6 cm. Calculate the number of alloys that can be obtained.
- .....
- .....
- .....



## Final Examinations

- (22) Ahmed draw a picture of his brother Osama with a drawing scale 1 : 40  
If the real height of Osama is 160 cm. What is height in the picture ?

.....

.....

.....

- (23) A triangular garden in a school , the ratio between its side lengths is 3 : 4 : 5  
, if the perimeter of the garden is 120 metres , calculate the length of each of  
the sides of the garden.

.....

.....

.....

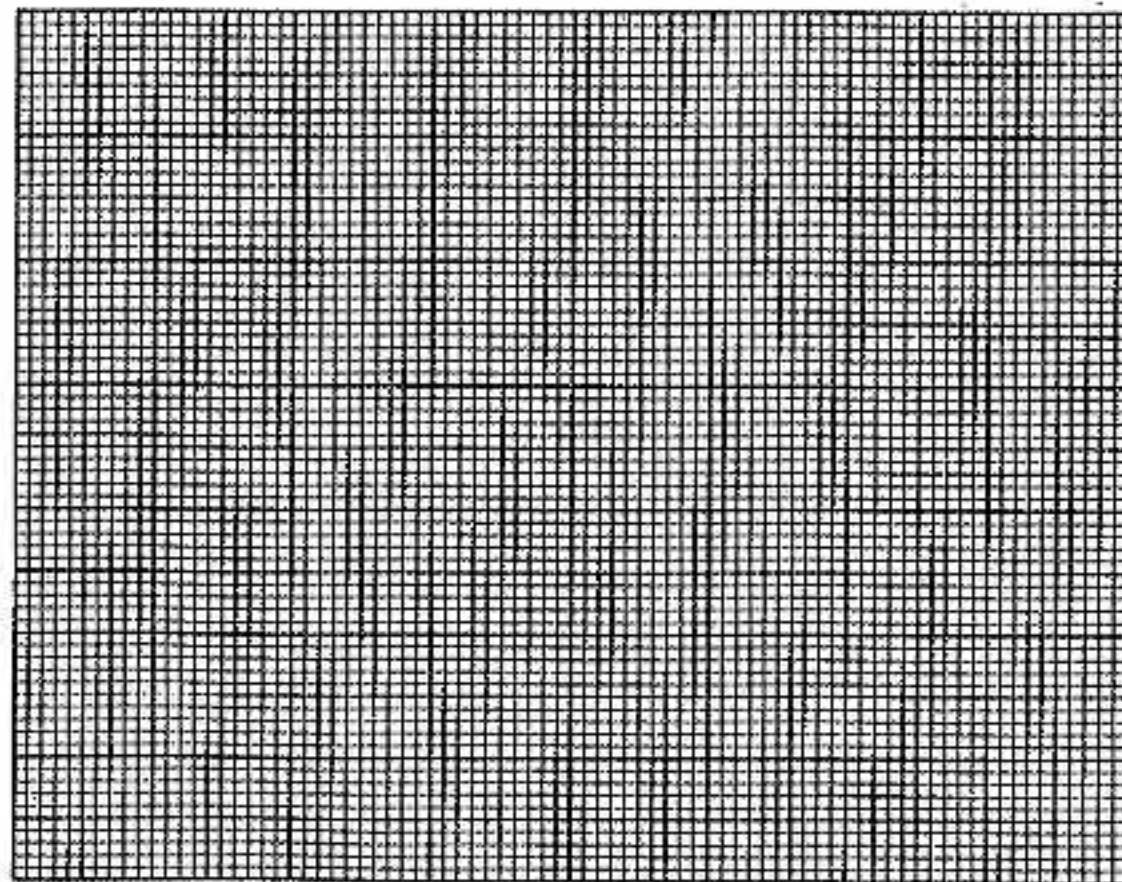
- (24) The following table shows the extra money which 100 workers got  
in a month in a factory :

The extra money	20 –	30 –	40 –	50 –	60 –	70 –	Total
Number of workers	20	15	30	20	10	5	100

[a] Draw the frequency curve of this distribution.

[b] What is the number of workers who obtained extra money less than 50 pounds ?

.....





## 18 Luxor Governorate

Luxor Educational Directorate  
Maths Department

Answer the following questions :

## 1 Choose the correct answer :

- (1) Parallelogram is a rectangle if one of its angles is .....  
(right **or** acute **or** obtuse **or** straight)
- (2) The ratio between the side length of the square to its perimeter  
is ..... : .....  
(1 : 5 **or** 1 : 3 **or** 1 : 4 **or** 4 : 1)
- (3) A car covers 240 km. in 3 hours , then the car speed is ..... km./hour  
(60 **or** 80 **or** 120 **or** 90)
- (4) The simplest form of the ratio 2.4 : 18 = ..... : .....  
(2 : 15 **or** 1 : 6 **or** 6 : 7 **or** 5 : 3)
- (5) In the proportion 6 , 8 , 3 , x , the value of x is .....  
(5 **or** 7 **or** 4 **or** 3)
- (6) All of the following are considered descriptive data except .....  
(name **or** age **or** address **or** hobbies)
- (7)  $16\ 000\text{ cm}^3 = \dots\dots\dots$  litres. (1.6 **or** 16 **or** 160 **or** 0.16)
- (8)  $\frac{2}{5} = \dots\dots\dots\%$  (20 **or** 40 **or** 60 **or** 10)
- (9) If  $a : b = 2 : 3$  and  $b : c = 5 : 6$  , then  $a : c = \dots\dots\dots$   
(5 : 9 **or** 9 : 7 **or** 5 : 8 **or** 15 : 11)
- (10) The sum of all edge lengths of a cube is 84 cm.  
, then its volume is .....  $\text{cm}^3$  (49 **or** 343 **or** 28 **or** 14)
- (11) 15 % of 400 = ..... (40 **or** 70 **or** 80 **or** 60)
- (12) 2 kg. : 3 500 gm. = ..... : ..... (2 : 3 **or** 7 : 6 **or** 4 : 7 **or** 5 : 4)

## 2 Complete the following :

- (1) The range of the set of values 7 , 3 , 8 , 9 and 5 is .....
- (2) Diagonals are equal in length in each of ..... and .....
- (3) If the drawing length is 3 cm. and the real length is 18 m. , then the drawing  
scale is ..... : .....
- (4) The volume of a cuboid is  $720\text{ cm}^3$  , and its height is 9 cm. , then its base  
area is .....  $\text{cm}^2$
- (5) If the buying price of some goods is L.E. 2 000 and it sold for L.E. 1 800 ,  
then the percentage of loss is ..... %





## Final Examinations

( 6 ) If  $\frac{2}{5} = \frac{8}{x}$ , then  $x = \dots\dots\dots$

( 7 )  $1 - 70\% = \dots\dots\dots\%$

( 8 ) The simplest form of the ratio  $12 : 18 : 36 = \dots\dots\dots : \dots\dots\dots : \dots\dots\dots$

## 3 Answer the following :

( 1 ) The ratio between Mina's age and Ahmed's age is  $7 : 11$ , and the difference between their ages is 8 years, find the age of each of them.

.....

.....

.....

( 2 ) A picture of a tree is drawn with a drawing scale  $1 : 100$ , if the real height of the tree is 8 m., find its length in the picture.

.....

.....

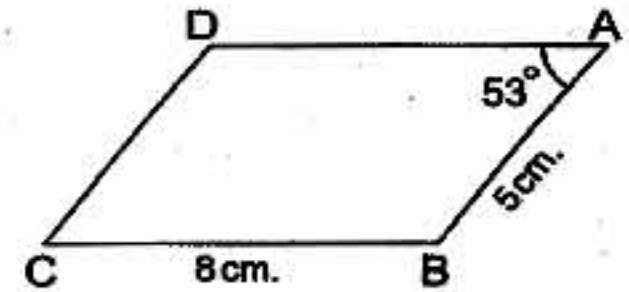
.....

( 3 ) A swimming pool is in the shape of cuboid whose internal dimensions are 40 m., 30 m. and 1.8 m., find its capacity in litre.

.....

.....

( 4 ) In the opposite figure :

ABCD is a parallelogram in which  $AB = 5$  cm.,  $BC = 8$  cm. and  $(\angle A) = 53^\circ$  Find :[a]  $m(\angle B)$ [b] The length of  $\overline{AD}$  and the length of  $\overline{DC}$ 

.....

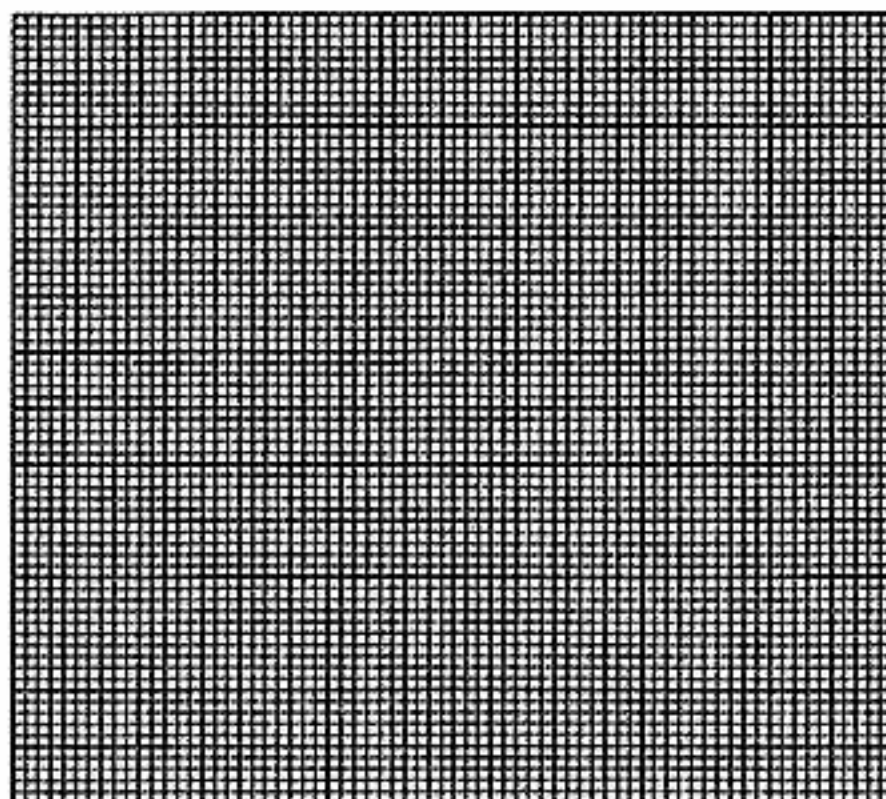
.....

( 5 ) The following table shows the ages of visitors to an exhibition within an hour of a day :

Visitor's age	10 -	20 -	30 -	40 -	50 -	Total
Number of visitors	6	9	12	10	8	45

Draw the frequency curve for this distribution.





## 19 Aswan Governorate

Aswan Educational Directorate  
Eng. M.M. Yacoub Formal Language School

Answer the following questions :

1 Choose the correct answer of the following :

- ( 1 ) The following data are quantitative except .....  
( age or weight or name )
- ( 2 ) If the sum of the edge lengths of a cube is 36 cm. , then its volume  
= ..... cm<sup>3</sup> ( 3 or 27 or 12 )
- ( 3 ) If  $a : b = 2 : 3$  ,  $b : c = 6 : 7$  , then  $a : c =$  .....  
( 7 : 4 or 12 : 7 or 4 : 7 )
- ( 4 )  $12 \text{ dm}^3 =$  ..... cm<sup>3</sup> ( 1 200 or 12 000 or 120 )
- ( 5 )  $\frac{2}{3} : 3 \frac{1}{3} =$  ..... : ..... ( 1 : 5 or 2 : 3 or 2 : 5 )
- ( 6 ) If one angle of a parallelogram is right , then it called a .....  
( rectangle or square or rhombus )
- ( 7 )  $1 \frac{3}{4} =$  ..... % ( 75 or 175 or 25 )
- ( 8 ) An agricultural tractor ploughs 28 feddans in 4 hours , the time that needed  
to plough 42 feddans is ..... hours. ( 4 or 12 or 6 )
- ( 9 ) If  $\frac{x}{18} = \frac{4}{6}$  , then  $x + 1 =$  ..... ( 13 or 11 or 12 )
- (10) If length of an insect in a picture is 40 cm. , and the real length is 2 mm.  
, then the drawing scale is ..... ( 200 : 1 or 20 : 1 or 1 : 200 )
- (11) If a car covered 280 km. in 4 hours , then the rate of covered distance per  
hour = ..... km./hr. ( 7 or 70 or 700 )
- (12) Two wires , the ratio between their lengths is 3 : 4 and their sum is 140 cm.  
, then the length of the second wire is ..... cm. ( 30 or 40 or 80 )





## Final Examinations

## 2 Complete each of the following :

( 1 ) The following figure in this pattern  is .....

( 2 ) Drawing scale = .....

( 3 ) If the volume of a cuboid is  $560 \text{ cm}^3$  and its height is 8 cm. , then its base area is .....  $\text{cm}^2$

( 4 ) If the marks of 5 pupils in a test are 36 , 40 , 57 , 29 and 33 , then the range of marks is .....

( 5 )  $1 - (25 \% + 30 \%) = \dots\dots\dots \%$

( 6 ) 80 minutes : 2 hours = ..... : ..... (in the simplest form)

( 7 ) A map is drawn with a scale 1 : 200 000 , if the distance between two cities is 8 km. in reality , then the length between them on that map is .....

( 8 ) The ratio between length of side of an equilateral triangle and its perimeter = ..... : .....

## 3 Answer the following :

( 1 ) Two persons started a commercial business , the first paid L.E. 5 000 and the second paid L.E. 8 000 , at the end of the year the profit was L.E. 3 900 Calculate the share of each of them from profit.

.....  
.....  
.....

( 2 ) A container has 16 litres of oil , it is wanted to put them in small bottles , the capacity of each of them is  $400 \text{ cm}^3$  Calculate the number of bottles.

.....  
.....  
.....

( 3 ) If buying price of electric sets is L.E. 72 000 and sold at 12 % profit. Calculate the selling price.

.....  
.....  
.....



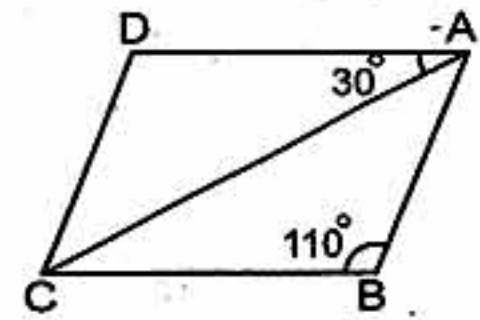
## Final Examinations

( 4 ) In the opposite figure :

ABCD is a parallelogram , then find :

[a]  $m(\angle D) = \dots\dots\dots^\circ$

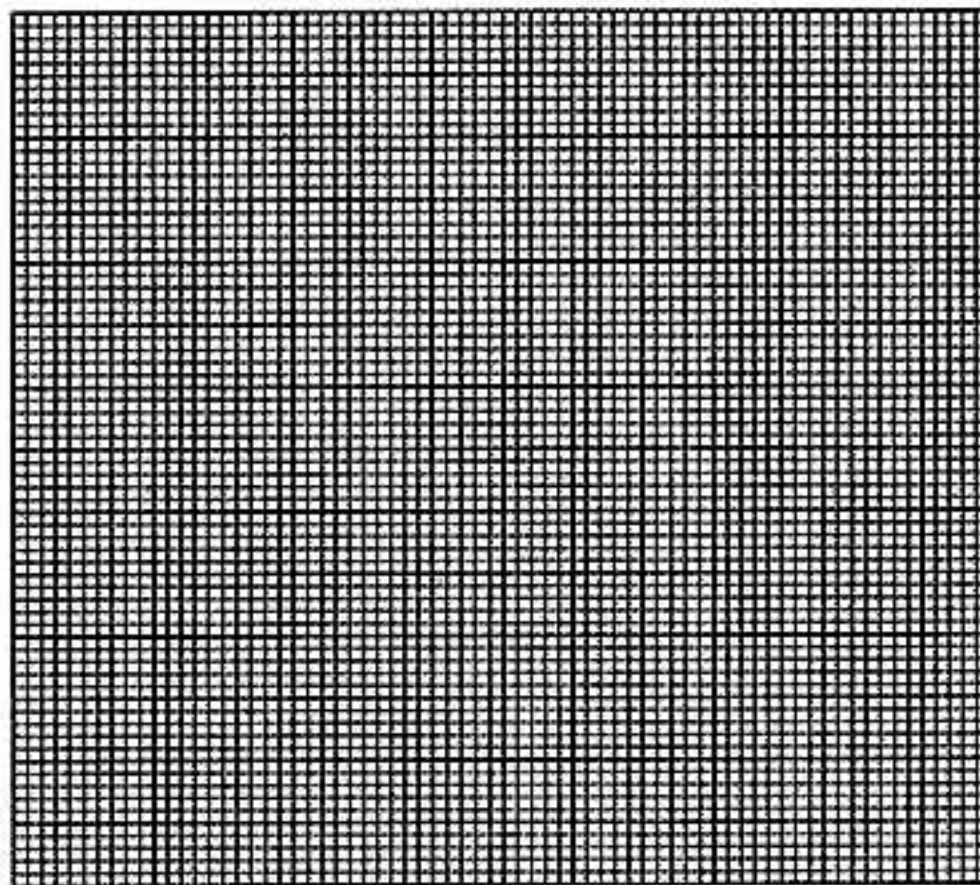
[b]  $m(\angle ACD) = \dots\dots\dots^\circ$



( 5 ) The following table shows the number of hours which spent by 40 pupils to study their lessons daily :

Number of hours	1 –	2 –	3 –	4 –	5 – 6	Total
Number of pupils	6	3	8	12	11	40

Represent these data using the frequency curve.



## 20 South Sinai Governorate

El-Tur Educational Zone  
Maths Inspection



Answer the following questions :

1 Choose the correct answer :

( 1 ) If 2 , 5 ,  $x$  and 15 are proportional , then  $x = \dots\dots\dots$

( 2 or 5 or 6 or 15 )

( 2 ) The percentage is a ratio its second term is .....

( 10 or 100 or 1 000 or 10 000 )

( 3 ) 3 litres = .....  $\text{cm}^3$

( 3 or 30 or 300 or 3 000 )

( 4 ) If the ratio between a child's age to his father's age is 2 : 13 and the child's age is 6 years , then father's age = ..... years.

( 6 or 15 or 39 or 41 )

101



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## Final Examinations

- ( 5 ) The ratio between the two numbers 1.6 and 1.8 = ..... : .....  
( 1 : 4 or 8 : 9 or 3 : 8 or 1 : 16 )
- ( 6 ) The number of edges of the cube ..... the number of faces of the cuboid.  
( > or < or = or ≤ )
- ( 7 ) A merchant bought a TV set for L.E. 1 800 and he sold it for L.E. 2 000 , then his profit = L.E. ....  
( 1 800 or 800 or 200 or 3 800 )
- ( 8 ) The range of the set of values 7 , 3 , 6 , 9 and 5 is .....  
( 4 or 2 or 6 or 12 )
- ( 9 ) If the real length is 6 m. and the drawing length is 6 cm. , then the drawing scale = ..... : .....  
( 1 : 10 or 1 : 100 or 1 : 1 000 or 1 : 6 )
- (10) Antecedent of the ratio 3 : 11 is .....  
( 3 or 5 or 11 or 2 )
- (11) An agricultural tractor ploughs 28 feddans in 4 hours , then its rate of performance = ..... feddans / hour  
( 4 or 6 or 7 or 8 )
- (12) If one of the angles of a parallelogram is right angle , then it is called .....  
( a square or a rectangle or a rhombus or a triangle )

## 2 Complete :

- ( 1 )  $\frac{3}{4} = \dots\dots\dots \%$
- ( 2 ) The ratio between the side length of the square and its perimeter = ..... : .....
- ( 3 ) If the volume of a cuboid is  $64 \text{ cm}^3$  and the area of its base is  $16 \text{ cm}^2$  , then its height = ..... cm.
- ( 4 ) 250 grams :  $\frac{1}{2}$  kilogram = ..... : ..... (in the simplest form)
- ( 5 ) If the drawing scale  $< 1$  , this expresses .....
- ( 6 ) If  $a : b = 2 : 3$  ,  $b : c = 3 : 5$  , then  $a : c = \dots\dots\dots : \dots\dots\dots$
- ( 7 )  $4 \text{ m}^3 = \dots\dots\dots \text{ dm}^3$
- ( 8 ) The data : the age , the length , the weight and the favorite color are quantitative data except .....

## 3 Answer the following :

- ( 1 ) Nahed bought an automatic washing for L.E. 3 600 and the discount was 10 % Calculate the original price of the washing machine before discount.
- .....
- .....
- .....



## Final Examinations

- ( 2 ) The ratio among the measures of the angles of a triangle is 2 : 3 : 4  
Find the measure of each angle in the triangle.

.....

.....

.....

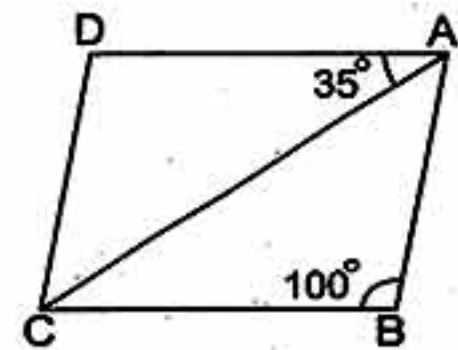
- ( 3 ) A vessel in the shape of a cube with edge length 15 cm. is filled with honey.  
Calculate the capacity of the vessel of the honey.

.....

.....

.....

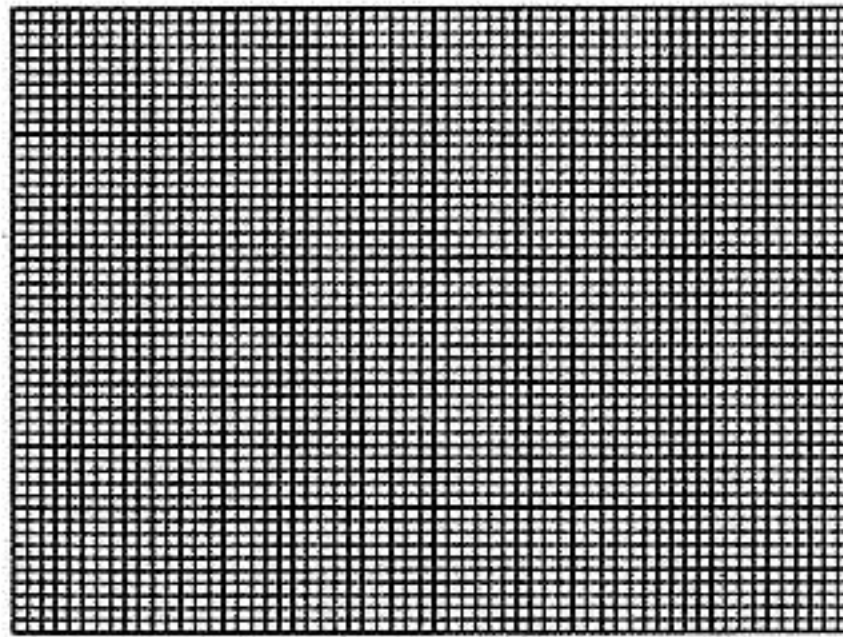
- ( 4 ) In the opposite figure :  
ABCD is a parallelogram , find :  
[a]  $m(\angle BAC) = \dots\dots\dots^\circ$   
[b]  $m(\angle D) = \dots\dots\dots^\circ$



- ( 5 ) The following table shows the marks of 100 students in one maths test :

Marks	10 –	20 –	30 –	40 –	Total
Number of students	15	30	40	15	100

Draw the frequency curve of this distribution.







**1**

## Cairo Governorate

Heliopolis Educational Directorate  
Patriarchal College Heliopolis

Answer the following questions :

**1** Choose the correct answer :

- (1)  $\frac{2}{3} : 2\frac{2}{3} = \dots\dots\dots$  ( 1 : 2 *or* 1 : 3 *or* 1 : 4 *or* 1 : 8 )
- (2) If  $\frac{x+4}{2} = 5$  , then  $x = \dots\dots\dots$  ( 2.5 *or* 6 *or* 10 *or* 14 )
- (3)  $500 \text{ dm}^3 = \dots\dots\dots$  litre. ( 0.5 *or* 50 *or* 500 *or* 500 000 )
- (4) The range of the values 5 , 4 , 8 , 12 , 7 is  $\dots\dots\dots$  ( 4 *or* 5 *or* 7 *or* 8 )
- (5)  $\frac{1}{2} : \frac{1}{3} : \frac{1}{4} = \dots\dots\dots$  ( 2 : 3 : 4 *or* 4 : 3 : 2 *or* 6 : 4 : 3 *or* 6 : 3 : 4 )
- (6) If the length in drawing is 2 cm. and the real length is 20 metres , then the drawing scale is 1 :  $\dots\dots\dots$  ( 10 *or* 100 *or* 1 000 *or* 10 000 )
- (7) If a is half b , and b is twice c , then  $a : c = \dots\dots\dots$  ( 1 : 1 *or* 1 : 2 *or* 1 : 4 *or* 2 : 1 )
- (8) 6 hours : 1 day =  $\dots\dots\dots$  ( 1 : 10 *or* 1 : 4 *or* 6 : 1 *or* 4 : 1 )
- (9) If 20 % of a number is 80 , then the number =  $\dots\dots\dots$  ( 16 *or* 40 *or* 400 *or* 1 600 )
- (10) The opposite data are quantitative except the  $\dots\dots\dots$   
( tallness *or* weight *or* favorite colour *or* age )
- (11) The base area of a cuboid is  $12 \text{ cm}^2$  and its volume is  $6 \text{ cm}^3$  , then its height is  $\dots\dots\dots$  cm. ( 2 *or* 6 *or* 72 *or*  $\frac{1}{2}$  )
- (12) If the sum of the edges lengths of a cube is 12 cm. , then its volume =  $\dots\dots\dots$   $\text{cm}^3$  ( 1 *or* 27 *or* 64 *or* 1 728 )
- (13) If a man drinks 3.5 litres of juice weekly , then the rate of what he drinks daily is  $\dots\dots\dots$  litre/day ( 3.5 *or*  $\frac{1}{2}$  *or* 2 *or* 3 500 )

**2** Complete :

- (1) 250 gm. :  $\frac{1}{2}$  kg. in the simplest form =  $\dots\dots\dots$
- (2) A tractor ploughs 28 feddans in 4 hours , then the time which is needed to plough 42 feddans is  $\dots\dots\dots$  hours.



- (3) The percentage is a ratio whose second term is .....
- (4) If we distribute 300 pounds between two persons, and the first share is  $\frac{1}{2}$  the second share, then the share of the first is ..... pounds.
- (5) If 2,  $x$ , 6, 9 are proportional, then  $x =$  .....

(6) In the opposite figure :

ABCD is a parallelogram

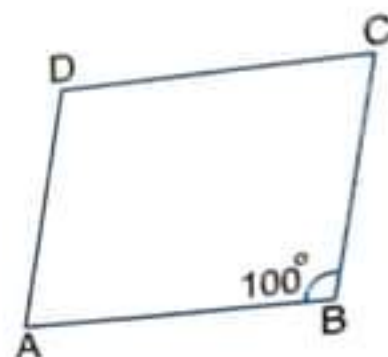
,  $m(\angle B) = 100^\circ$ , then :

[a]  $m(\angle A) = \dots\dots\dots^\circ$

[b] The ratio between  $m(\angle B)$  and  $m(\angle C) = \dots\dots\dots$  (in the simplest form).

[c] If  $AB + BC = 10$  cm., then the perimeter of the parallelogram ABCD = ..... cm.

[d] If  $AB = BC$ , then the figure ABCD is called a .....



**3** Answer the following questions :

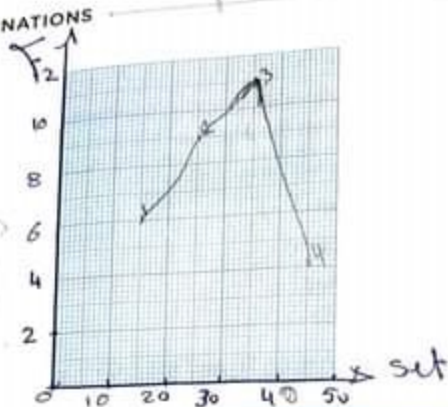
- (1) Mariam bought a TV set for 1 800 pounds after a discount of 10 %  
Calculate the price of the TV before the discount.  
.....  
.....  
.....  
.....
- (2) A swimming pool in the shape of a cuboid whose internal dimensions are 40 m., 30 m. and 1.8 m. Find its capacity in litres.  
.....  
.....  
.....
- (3) A map is drawn with a scale 1 : 600 000, if the distance between two cities on this map is 4 cm., find the real distance between the two cities in kilometres.  
.....  
.....  
.....

(4) The following table shows the marks of 30 pupils in an exam :

Marks	10 -	20 -	30 -	40 -	Total
Number of pupils	6	9	11	4	30

Draw the frequency curve representing this distribution.





2

## Cairo Governorate

Nasr City Educational Directorate  
Al-Ola Language Modern Schools

Answer the following questions :

1 Choose the correct answer :

- (1)  $\frac{1}{2}$  kg. : 700 gm. = ..... (2 : 7 or 5 : 7 or 7 : 5 or 50 : 7)
- (2) If one angle of a parallelogram is right , then it is called a .....  
(trapezium or rhombus or cube or rectangle)
- (3) 25 % from 200 = ..... (20 or 40 or 50 or 100)
- (4) If  $a : b = 5 : 6$  and  $b : c = 3 : 4$  , then  $a : c = 5 : \dots\dots\dots$   
(7 or 8 or 6 or 9)
- (5) If the drawing length is 7 cm. and the real length is 28 metres , then drawing scale = ..... (1 : 4 or 1 : 400 or 400 : 1 or 1 : 40)
- (6) The ratio between three numbers is 3 : 4 : 7 and their sum is 70 , then the greatest number = ..... (15 or 35 or 20 or 14)
- (7) If  $\frac{x-1}{10} = 0.7$  , then  $x = \dots\dots\dots$  (7 or 8 or 10 or 9)
- (8) The range of data 7 , 3 , 6 , 9 and 5 is ..... (2 or 4 or 6 or 12)
- (9) In a class the percentage of the number of girls is 54 % , then the percentage of the number of boys is ..... % (56 or 64 or 46 or 36)
- (10) If the dimensions of cuboid is 3 cm. , 4 cm. and 6 cm. , then its volume = .....  $\text{cm}^3$  (40 or 60 or 52 or 72)
- (11)  $\frac{24}{5} = \dots\dots\dots$  (4  $\frac{1}{5}$  or 3  $\frac{2}{5}$  or 4  $\frac{4}{5}$  or 2  $\frac{4}{5}$ )



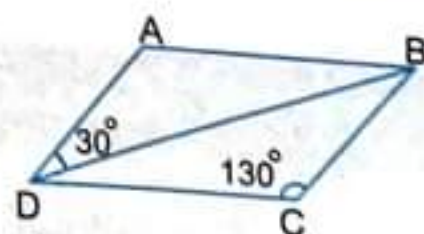
- (12) In the proportion , the product of the extremes ..... The product the means. ( < or > or = or ≠ )
- (13) The opposite data are descriptive except .....  
( favorite colour or place of birth or age or blood species )

2 Complete :

- (14) 18 kirats : 2 feddans = ..... : ..... (in the simplest form)
- (15) The ratio between the measures of angles of triangle is 3 : 4 : 5 , then the measure of the smallest angle is .....
- (16) The quadrilateral which each two opposite sides are parallel and equal in length is .....
- (17)  $1 - (39\% + 41\%) = \dots\dots\dots\%$
- (18) If the distance between two cities on a map is 3 cm. and the real distance between them is 9 km. , then the drawing scale of the map = .....
- (19) If a car consumes 20 litres of fuel to cover a distance of 180 km. , then the number of litres needed to cover 540 km. is .....
- (20)  $2.5 \text{ L.} + 500 \text{ cm}^3 = \dots\dots\dots \text{L.}$
- (21) If the numbers 2 ,  $x$  , 6 and 9 are proportional , then the value of  $x = \dots\dots\dots$
- (22) If the perimeter of base of a cube is 16 cm. , then its volume = .....  $\text{cm}^3$ .

3 Answer the following :

- (23) ABCD is a parallelogram in which  
 $m(\angle C) = 130^\circ$  ,  $m(\angle ADB) = 30^\circ$   
Find :  $m(\angle A)$  and  $m(\angle ABD)$



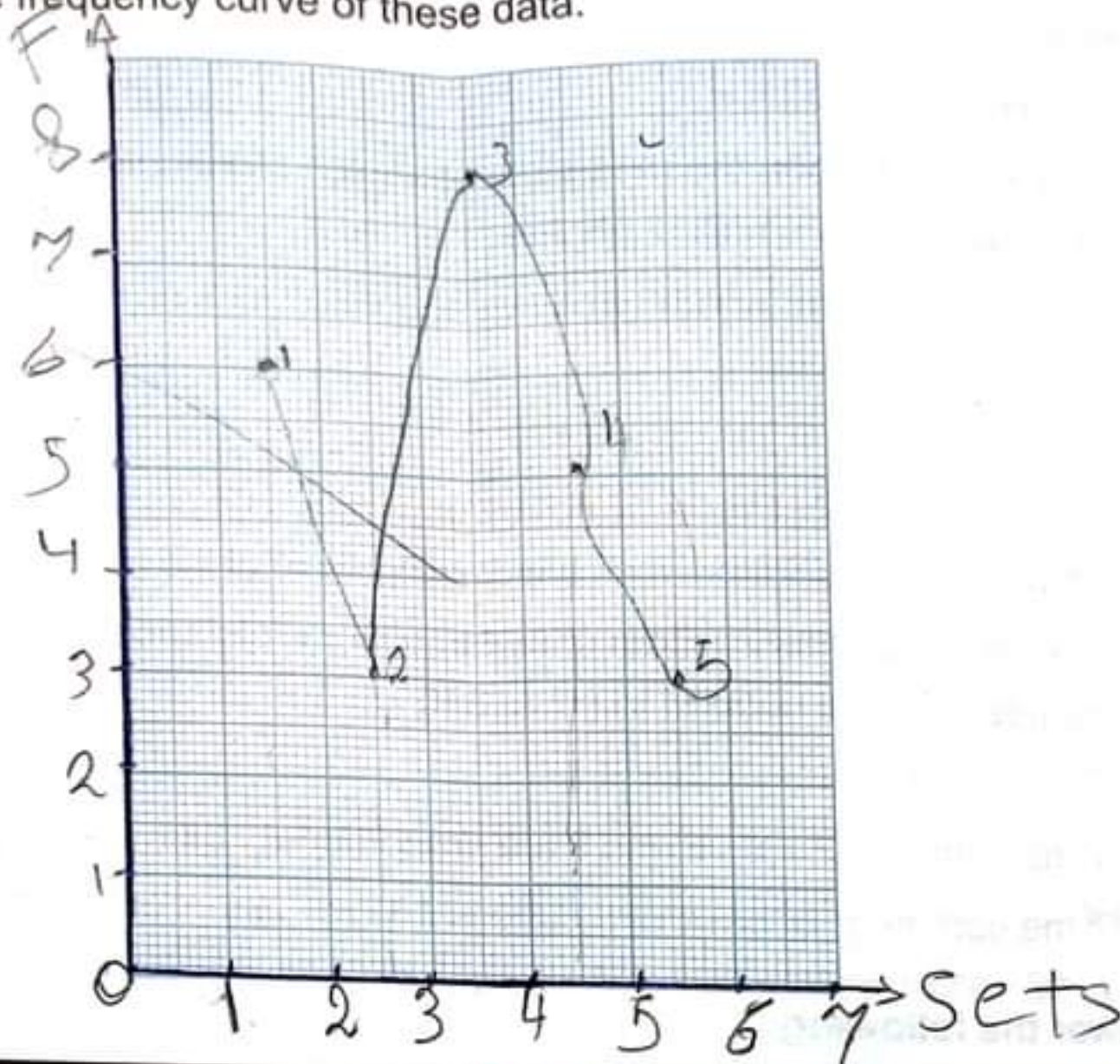
- (24) Ahmed studies 21 hours weekly , find the rate of his studying daily.
- (25) Samir bought a refrigerator in the time of sale with price L.E. 7 600 after discount 5 % Find the price of refrigerator before discount.



- (26) The following table shows the number of hours which are spent by pupils study their lessons daily :

Number of hours	1 -	2 -	3 -	4 -	5 - 6	Total
Number of pupils	6	3	8	5	3	25

Draw the frequency curve of these data.



**3**

**Giza Governorate**

El-Dokki Educational Zone  
Orouba Language School



Answer the following questions :

- 1** Choose the correct answer :

(1)  $\frac{513}{614} \dots\dots\dots \frac{432}{145}$

( < or > or = or ≥ )

(2) 18 kirats :  $1\frac{1}{2}$  feddan = ..... : .....

( 2 : 1 or 1 : 3 or 1 : 4 or 1 : 2 )

(3) If the numbers 2 , x , 8 and 20 are proportional , then x = .....

( 4 or 5 or 6 or 22 )

(4) All angles of a rectangle are equal in measure and the measure of each of them = .....

( 45° or 90° or 110° or 180° )

(5) If the ratio between the weight of Ali and the weight of Omar is 3 : 4 and if the weight of Ali is 30 kg. , then the weight of Omar = ..... kg.

( 7 or 70 or 40 or 35 )



(6)  $300 \text{ mm}^3 = \dots \text{ cm}^3$

(0.3 or 3 or 30 or 3 000)

(7) The following data are descriptive data except .....

( favorite colour or birth place or age or blood species )

(8) In a class the percentage of girls was 46 % from the total numbers of pupils , then the percentage of boys = ..... % ( 46 or 100 or 54 or 146 )

(9) If the real distance between two cities is 9 km. and the distance between them on a map is 3 cm. , then the drawing scale = .....

( 1 : 3 or 1 : 300 or 1 : 300 000 or 300 000 : 1 )

(10) If  $A : B = 2 : 3$  ,  $B : C = 4 : 5$  , then  $A : C = \dots$

( 8 : 15 or 15 : 8 or 2 : 5 or 3 : 5 )

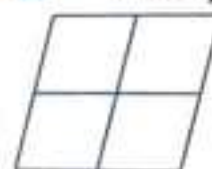
(11) The range of the set of values 35 , 67 , 90 , 48 and 23 is .....

( 12 or 67 or 113 or 58 )

(12) A cube , the area of its base  $36 \text{ cm}^2$  , then its volume = .....  $\text{cm}^3$

( 6 or 72 or 216 or 108 )

(13) The number of a parallelograms that can be obtained = .....



( 4 or 5 or 7 or 9 )

## 2 Complete :

(1) The proportion is .....

(2) The diagonals are perpendicular and not equal in length in .....

(3) 61 days  $\approx$  ..... weeks.

(4) If  $\frac{3}{7} = \frac{x}{35}$  , then  $x + 2 = \dots$

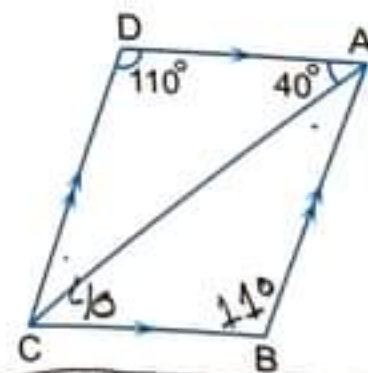
(5)  $\frac{4}{10} = \dots \%$

(6) If a car consumes 20 litres of fuel to cover a distance 250 km. , then rate of consumption of fuel = .....

(7) If the drawing scale  $> 1$  , then this expresses .....

(8) In the opposite figure :

ABCD is a parallelogram in which  
 $m(\angle D) = 110^\circ$  ,  $m(\angle CAD) = 40^\circ$  , then  
 $m(\angle ACB) = \dots$   
 and  $m(\angle B) = \dots$



$$180 - (110 + 40)$$

(9) In the following table :

The age	10 -	20 -	30 -	40 -
Number of patients	6	8	12	9

The number of patients less than 30 years = .....

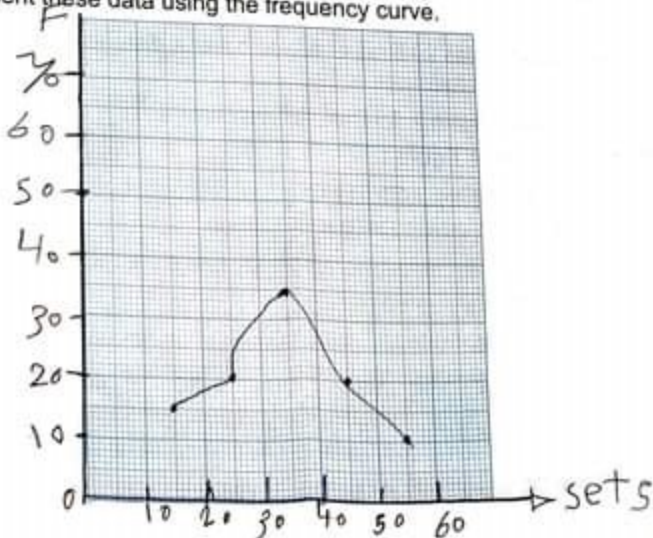


3 Answer the following questions :

- (1) If the ratio between the measures of the angles of a triangle is 1 : 2 : 3 , then find the measure of each angle of the triangle.
- (2) A shopkeeper for electric sets sold a TV set for L.E. 3 180 , if the percentage of his profit is 6 % , then find the buying price and find the profit.
- (3) 10 litres of oil were poured in a vessel in the shape of a cuboid , its base is a square of side length 25 cm. Find the height of the oil in the vessel.
- (4) The following table shows the extra money which 100 workers got in one month in a factory :

The extra money	10 -	20 -	30 -	40 -	50 -	Total
Number of workers	15	20	35	20	10	100

Represent these data using the frequency curve.












Answer the following questions :

**1** Choose the correct answer :

- (1) From descriptive data .....  
( blood species or height or weight or age )
- (2) If  $\frac{3}{5} = \frac{x}{10}$ , then  $x : 12 =$  ..... ( 1 : 2 or 3 : 2 or 1 : 3 or 3 : 5 )
- (3)  $0.35 =$  ..... % ( 3.5 or 0.35 or 35 or 350 )
- (4) The next shape in the pattern  is .....  
(  or  or  or  )
- (5) The sum of lengths of all edges of a cube is 72 cm. , then its edge length = ..... cm. ( 4 or 6 or 8 or 9 )
- (6) The range of the set of values 22 , 39 , 62 , 54 = .....  
( 40 or 17 or 15 or 24 )
- (7) The ratio  $\frac{3}{4} : \frac{5}{6} =$  ..... : ..... (in the simplest form)  
( 3 : 5 or 9 : 10 or 4 : 5 or 1 : 2 )
- (8) If one angle of a parallelogram is right , then it is called a .....  
( rhombus or rectangle or trapezium or square )
- (9) If  $\frac{A}{B} = \frac{C}{D}$ , then .....  
(  $(A \times D = B \times C)$  or  $(A \times B = C \times D)$  or  $(A \times C = B \times D)$  )
- (10) A cuboid its base area is  $20 \text{ cm}^2$  and its height is 6 cm. , then its volume = .....  $\text{cm}^3$ . ( 60 or 120 or 720 or 600 )
- (11) In proportion , the product of the extremes ..... The product of the means.  
( > or = or < )

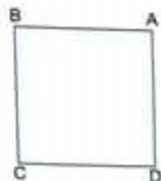
**(12) In the opposite figure :**

ABCD is a square

, then the ratio between

AB : CD = ..... :

( 1 : 1 or 1 : 2 or 1 : 3 or 2 : 1 )



**(13)**  $\text{cm}^3$  is the measuring unit of .....

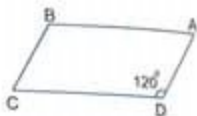
( capacity or volume or area or perimeter )

**2** Complete :

( 1 ) 18 kirats : 2 feddans = ..... (in its simplest form)



- (2) If  $A : B = 2 : 3$  ,  $B : C = 3 : 5$  , then  $A : C =$  ..... :
- (3)  $1 - 75\% =$  ..... %
- (4) A car covers 240 km. in 3 hours , then the rate of what the car covers is ..... km./h.
- (5) If the real length of an insect is 2 mm. and its length after enlargement is 4 cm. , then the drawing scale is ..... :
- (6) The four angles are right in each of ..... and .....
- (7) The number of faces of a cuboid = ..... faces.
- (8) In the opposite figure :  
 ABCD is a parallelogram , then  
 $m(\angle C) =$  ..... °
- (9) A cube of edge length = 6 cm. , then its volume = .....  $\text{cm}^3$ .



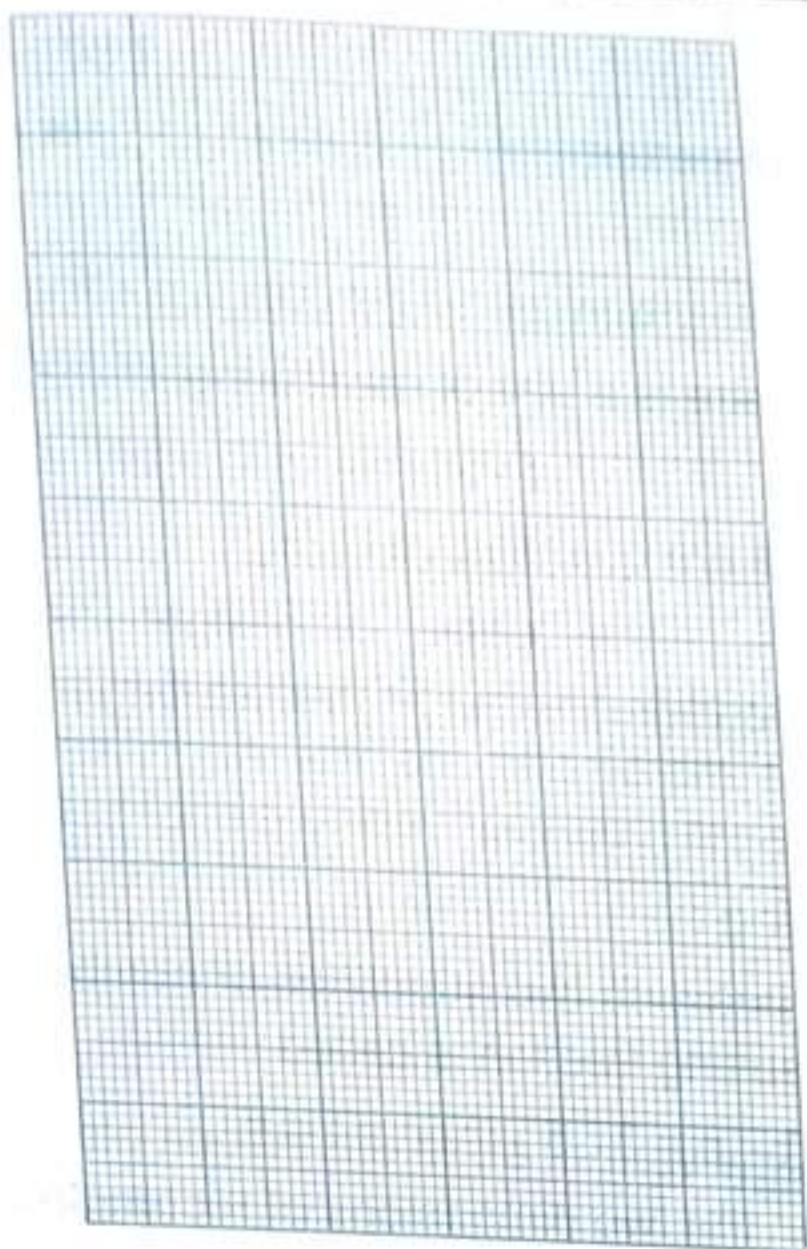
**3 Answer the following :**

- (1) If the ratio between the length of two pieces of cloth is 6 : 8 and the sum of their lengths is 126 cm. , calculate the length of each piece.  
 .....  
 .....  
 .....
- (2) The volume of a cuboid is  $54 \text{ cm}^3$  , its base is square shaped of side length 3 cm. , calculate its height.  
 .....  
 .....  
 .....
- (3) A man put 3 000 L.E. in a bank with an interest 10 % Calculate the sum of the money after a year.  
 .....  
 .....  
 .....



Using the following table, draw the frequency curve :

Set	5 -	10 -	15 -	20 -
Frequency	4	8	10	4



## 5 Alexandria Governorate

El-Montaza Educational Zone  
Maths Inspection



Answer the following questions :

1 Choose the correct answer from the brackets :

(1) The ratio between 16 , 64 in the simplest form = ..... : .....

( 1 : 4 **or** 2 : 8 **or** 1 : 8 **or** 2 : 4 )

(2) The ratio between the side length of an equilateral triangle and its perimeter = ..... : ..... ( 3 : 1 **or** 1 : 2 **or** 1 : 3 **or** 1 : 4 )

(3) If Hazem studies 21 hours weekly , then the rate of his studying daily = ..... hours per day. ( 7 **or** 3 **or** 14 **or** 147 )

(4) If  $\frac{5}{8} = \frac{15}{x}$  , then  $x =$  ..... ( 42 **or** 5 **or** 15 **or** 24 )

(5) If the percentage of the number of girls in a class which is mixed is 67 % , then the percentage of the number of boys in this class = ..... % ( 100 **or** 167 **or** 33 **or** 67 )



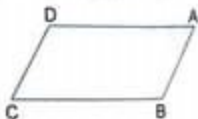
- (6) The original price for a shirt is 65 pounds with a discount 15 %, then the paid value = ..... pounds. ( 5 525 or 55.25 or 25.55 or 55 )
- (7)  $\frac{3}{4}$  = ..... (in decimal fraction). ( 0.2 or 0.5 or 0.25 or 0.75 )
- (8) A parallelogram is called rectangle if the measure of one of its angles = .....\* ( 80 or 90 or 91 or 180 )
- (9) Description of the pattern  $\nabla \square \nabla \square$  is repetition for ..... (  $\nabla$  or  $\nabla \square$  or  $\nabla \square \nabla$  or  $\square$  )
- (10)  $700.5 \text{ cm}^3$  = .....  $\text{mm}^3$ . ( 7 005 or 700 500 or 1 000 or 75 )
- (11) The cubic centimetre is a unit of measuring ..... ( volume or area or perimeter or length )
- (12) The following data are quantitative except ..... ( age or height or birth place or weight )
- (13) The range = the maximum value  $\square$  the minimum value (  $\times$  or  $-$  or  $+$  or  $+$  )

## 2 Complete the following :

- (1) When comparing between two quantities or numbers of the same type and same units the resulting fraction is called .....
- (2) If  $a : b = 2 : 3$  ,  $b : c = 3 : 5$  , then  $a : c =$  ..... :
- (3) If the ratio between the two dimensions of rectangle is 3 : 4 and its perimeter is 140 cm. , then its area = .....  $\text{cm}^2$ .
- (4) The ratio between 250 piastres ,  $7\frac{1}{2}$  pounds = ..... : ..... (in the simplest form)
- (5)  $1\frac{3}{4}$  = ..... %

### (6) In the opposite figure :

ABCD a parallelogram ,  $m(\angle A) + m(\angle B) =$  .....°



- (7)  $1 \text{ m}^3$  = ..... litres.
- (8) The sum of the edge lengths of a cube is 132 cm. , then its volume = .....  $\text{cm}^3$ .
- (9) The following table shows the marks of 50 students in math exam :

The marks	10 -	20 -	30 -	40 - 50	Total
Number of students	5	15	20	10	50

Then the number of students who got less than 40 marks = .....



1 Answer the following : (Write the steps of the solution)

- (1) The number of pupils in a primary school in the 1<sup>st</sup>, the 2<sup>nd</sup> and the 3<sup>rd</sup> grades is 240 pupils, if the ratio among the three grades is 5 : 4 : 3, calculate the number of pupils in each grade.

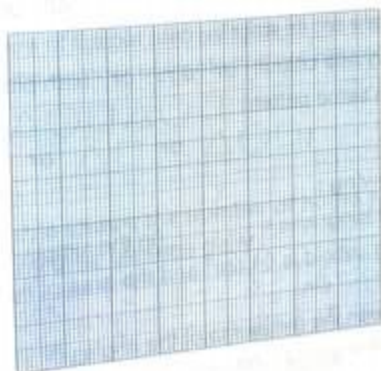
- (2) If the length of the Suez Canal on a map of drawing scale 1 : 1 100 000 is 15 cm., find its real length in km.

- (3) 8 400 cm<sup>3</sup> of water is poured into a vessel in the shape of cuboid with internal dimensions 20 cm., 35 cm. and 45 cm. Find the volume of water needed to be added for the vessel becomes filled with water completely.

- (4) The following table shows the extra money which 100 workers got in a month in a factory :

The extra money	20 -	30 -	40 -	50 -	60 -	70 -	Total
Number of workers	20	15	30	20	10	5	100

Draw the frequency curve for this data.





6

El-Kalyoubia Governorate

Maths Supervision



Answer the following questions :

1 Choose the correct answer :

- (1)  $\frac{3}{4} = \dots\dots\dots$  (in decimal form). (0.2 or 0.5 or 0.25 or 0.75)
- (2) The cube has  $\dots\dots\dots$  edges. (4 or 6 or 8 or 12)
- (3) If  $\frac{4}{6} = \frac{12}{x}$ , the  $x + 2 = \dots\dots\dots$  (16 or 18 or 20 or 22)
- (4) If the real length is 6 m. and the drawing length is 6 cm. , then the drawing scale is  $\dots\dots\dots$  (1 : 10 or 1 : 100 or 1 : 1 000)
- (5) If the numbers 4 ,  $x$  , 12 and 18 are proportional , then  $x = \dots\dots\dots$  (16 or 10 or 4 or 6)
- (6) The range of the set of values 7 , 3 , 6 , 9 and 5 is  $\dots\dots\dots$  (2 or 4 or 6 or 12)
- (7) An agricultural tractor ploughs 28 feddans in 4 hours , then the time which needed to ploughs 42 feddans is  $\dots\dots\dots$  hours. (4 or 6 or 7 or 8)
- (8) ABCD is a parallelogram in which  $m(\angle B) = 100^\circ$  , then  $m(\angle D) = \dots\dots\dots$  (120° or 60° or 100° or 50°)
- (9) If the ratio between the weight of Hani and the weight of Ahmed is 5 : 6 , if the weight of Ahmed is 60 kilograms , then the weight of Hani =  $\dots\dots\dots$  kilograms. (25 or 50 or 60 or 30)
- (10) The two diagonals are equal in length and perpendicular in  $\dots\dots\dots$  (rectangle or square or parallelogram or rhombus)
- (11)  $\frac{3}{10} = \dots\dots\dots\%$  (40 or 33 or 30 or 70)
- (12) The following data are descriptive data except  $\dots\dots\dots$  (favorite colour or age or birth place or blood species)
- (13) Complete in the same pattern :  $\square \bigcirc \triangle \square \bigcirc \triangle \dots\dots\dots$  ( $\square \bigcirc \triangle$  or  $\square \triangle$  or  $\bigcirc \square \triangle$  or  $\bigcirc \triangle$ )

2 Complete the following :

- (1) 5 000 grams : 8 kilograms =  $\dots\dots\dots$  (in the simplest form).
- (2) The volume of a cuboid is  $64 \text{ cm}^3$  and the area of its base is  $16 \text{ cm}^2$  , then its height =  $\dots\dots\dots$  cm.
- (3) If the ratio between the measures of the angles of a triangle is 2 : 3 : 4 , then the measure of the greatest angle =  $\dots\dots\dots$



(4) 3 litres = .....  $\text{cm}^3$

(5) A wooden box in the form of a cube, its external volume is  $1\,000\text{ cm}^3$ , its capacity is  $729\text{ cm}^3$ , then the volume of the wood of the box = .....  $\text{cm}^3$

(6) The following table shows the marks of 40 students in one test, then the number of students who got less than 30 marks = .....

Marks	10 –	20 –	30 – 40
Number of students	10	13	17

(7) If  $A : B = 2 : 3$ ,  $B : C = 3 : 5$ , then  $A : C =$  .....

(8) The ratio between the side length of the square and its perimeter = .....

(9) The area of the triangle =  $\frac{1}{2} \times$  .....  $\times$  .....

### 3 Answer the following :

(1) Heba bought a mobile for 680 pounds with a discount 15 % Calculate the price of this mobile before the discount.

.....

.....

.....

(2) Two persons started a commercial business, the first paid 5 000 pounds and the second paid 8 000 pounds, at the end of the year the net profit was 3 900 pounds. Calculate the share of each of them from the profit.

.....

.....

.....

(3) A metallic cube of edge length is 12 cm. , it needs to be converted it into ingots in the shape of cuboid each of them of dimensions 3 cm. , 4 cm. and 6 cm. Calculate the number of ingots that are obtained.

.....

.....

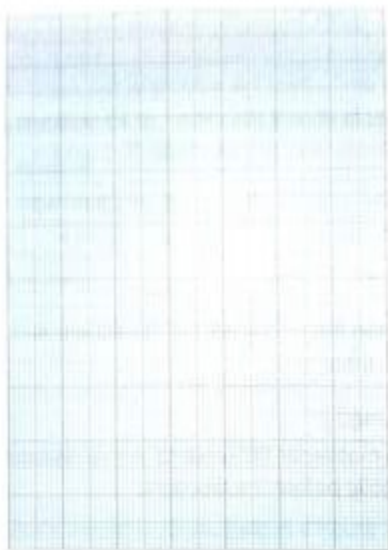
.....

(4) The following table shows the number of hours which spend by 30 pupils to study their lessons daily :

Number of hours	1 –	2 –	3 –	4 –	5 – 6	Total
Number of pupils	3	4	9	8	6	30

Represent these data using the frequency curve.



**7****El-Sharkia Governorate**East Zagazig Educational Directorate  
Omar Al-Farouk Formal School

Answer the following questions :

**1** Choose the correct answer :

- ( 1 ) 3 litres = .....  $\text{cm}^3$  ( 3 or 30 or 300 or 3 000 )
- ( 2 ) The range of the set of values 2 , 3 , 6 , 9 and 5 is ..... ( 4 or 7 or 6 or 12 )
- ( 3 ) The percentage is a ratio its second term is ..... ( 10 or 100 or 1 000 or 10 000 )
- ( 4 ) The ratio between the two numbers 2.4 and 3.6 = ..... ; ..... ( 1 : 4 or 2 : 3 or 3 : 6 or 1 : 16 )
- ( 5 ) If 2 , 5 , X , 15 are proportional , then X = ..... ( 2 or 5 or 6 or 15 )
- ( 6 ) The diagonals are equal in length in ..... ( trapezium or rectangle or rhombus or triangle )



- (7) 18 kirats : 1 feddan = ..... : .....  
 (1 : 2 or 3 : 8 or 1 : 24 or 3 : 4)
- (8)  $\frac{2}{3} : 3 \frac{1}{3} = \dots\dots\dots : \dots\dots\dots$   
 (1 : 3 or 1 : 2 or 2 : 3 or 1 : 5)
- (9) If the drawing scale  $< 1$ , this expresses .....  
 (equality or maximization or enlargement or minimization)
- (10) The consequent of the ratio 3 : 11 is ..... (3 or 5 or 11 or 2)
- (11) The ratio between the side length of the square to its perimeter is ..... : .....  
 (1 : 2 or 1 : 3 or 4 : 1 or 1 : 4)
- (12) The following data are descriptive data except .....  
 (length or birth place or name or favorite colour)

**2 Complete :**

- (1)  $\frac{3}{4} = \dots\dots\dots \%$
- (2)  $1 - (25\% + 30\%) = \dots\dots\dots \%$
- (3) The volume of a cuboid is  $64 \text{ cm}^3$ , and area of its base is  $16 \text{ cm}^2$ , then its height = ..... cm.
- (4)  $\frac{2}{5} = \frac{x}{20}$ , then  $x = \dots\dots\dots$
- (5) If the real length of a tree is 6 m, and its drawing length is 3 cm, then the drawing scale = ..... : .....
- (6) 5 000 grams : 8 kilograms = ..... : ..... (in the simplest form)
- (7) An agricultural tractor ploughs 28 feddans in 4 hours, then its rate of performance is .....
- (8) If  $A : B = 1 : 2$ ,  $B : C = 3 : 5$ , then  $A : C = \dots\dots\dots : \dots\dots\dots$

**3 Answer the following questions :**

- (1) If the buying price of electric sets is L.E. 60 000 and sold at 10 % profit. Calculate the selling price.
- .....
- .....
- .....

- (2) A container has 24 litres of oil, it is wanted to put them in small bottles, the capacity of each of them is  $400 \text{ cm}^3$ . Calculate the number of bottles.
- .....
- .....
- .....

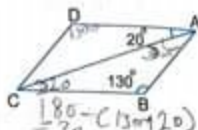


- (3) In the opposite figure :

ABCD is a parallelogram , then find :

[a]  $m(\angle D) = \dots\dots\dots^\circ$

[b]  $m(\angle ACD) = \dots\dots\dots^\circ$



- (4) The ratio among the measurements of the angles of a triangle is 3 : 7 : 8 , find the measure of each angle in the triangle.

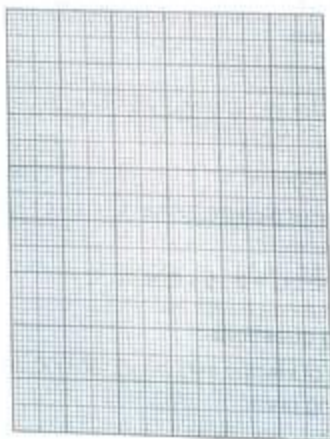
1st angle =  $\frac{3}{3+7+8} \times 180 = \frac{3}{18} \times 180 = 30^\circ$   
 2nd angle =  $\frac{7}{18} \times 180 = 70^\circ$   
 3rd angle =  $\frac{8}{18} \times 180 = 80^\circ$

- (5) The following table shows the marks of 100 pupils in one of the math tests :

tests : 1-30° 2-70° 3-80°

Marks	10 -	20 -	30 -	40 -	Total
Number of pupils	15	30	40	15	100

Draw the frequency curve for this distribution.



8

El-Monofia Governorate

Ashmoun Educational Zone  
Maths Inspection



Answer the following questions :

- 1 Choose the correct answer :

- (1) The ratio between 5 000 gm. and 8 kg. is .....

( 5 : 8 or 5 : 80 or 8 : 5 or 80 : 5 )



- (2)  $65 \text{ cm}^3 = \dots\dots\dots \text{ mL}$ . (0.065 or 6.5 or 65 or 0.65)
- (3) If the numbers 3, 5,  $x$  and 10 are proportional, then  $x = \dots\dots\dots$  (8 or 6 or 12 or 15)
- (4) A cuboid its base area is  $40 \text{ cm}^2$  and its height is 5 cm, then its volume is  $\dots\dots\dots \text{ cm}^3$ . (200 or 2 000 or 45 or 8)
- (5) The following data are descriptive except  $\dots\dots\dots$  (job or religion or weight or hobby)
- (6) A car covers 720 km. in 6 hours, then its rate =  $\dots\dots\dots \text{ km./hr.}$  (20 or 120 or 12 or 160)
- (7)  $\frac{3}{5} = \dots\dots\dots \%$  (15 or 40 or 60 or 80)
- (8) If the edge length of a cube is 5 cm, then the sum of all edges =  $\dots\dots\dots \text{ cm.}$  (125 or 15 or 60 or 25)
- (9) If the real length is 6 m. and its drawing length is 6 cm, then the drawing scale is  $\dots\dots\dots$  (1 : 1 or 100 : 1 or 1 : 1 000 or 1 : 100)
- (10) If the values of frequency distribution lie between (19, 49), then the range of this distribution =  $\dots\dots\dots$  (30 or 68 or 49 or 19)
- (11) All angles are right and the two diagonals are perpendicular in  $\dots\dots\dots$  (rectangle or rhombus or square or parallelogram)
- (12)  $\frac{5}{7} : \frac{3}{7} = \dots\dots\dots$  (5 : 3 or 3 : 5 or 3 : 7 or 5 : 7)
- (13) A trader sold some goods by losing percentage 20%, then the percentage of the selling price was  $\dots\dots\dots \%$  (120 or 80 or 20 or 100)

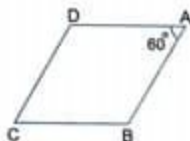
**2 Complete the following :**

- (1) A cube its base area is  $25 \text{ cm}^2$ , then its volume =  $\dots\dots\dots \text{ cm}^3$
- (2) If  $7 : 13 = x : 52$ , then  $x = \dots\dots\dots$
- (3) The drawing scale =  $\dots\dots\dots$
- (4)  $32\% + 27\% + \dots\dots\dots = 100\%$
- (5) The types of the statistical data are  $\dots\dots\dots$  and  $\dots\dots\dots$
- (6) **In the opposite figure :**

ABCD is a parallelogram

,  $m(\angle A) = 60^\circ$

, then  $m(\angle B) = \dots\dots\dots$



- (7) If the volume of a cuboid is  $36 \text{ cm}^3$ , and its height is 4 cm, then its base area =  $\dots\dots\dots \text{ cm}^2$



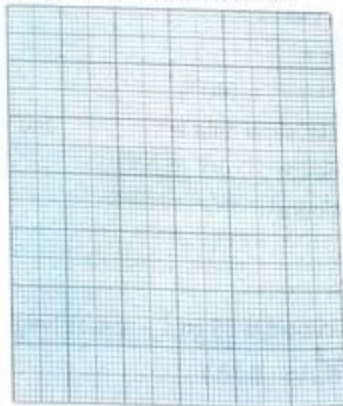
- (8) An agricultural machine ploughs 18 feddans in 3 hours, then its performance rate is \_\_\_\_\_ feddans/hour.

**3 Answer the following :**

- (1) If the drawing scale of a map is 1 : 1 000 000 and the real length between two cities is 20 km. Find the distance between them on this map.  
 .....  
 .....
- (2) Mona bought a TV set with discount 20 % from the declared price which was 2 500 pounds. Find its price after discount.  
 .....  
 .....
- (3) A box in the shape of a cuboid with dimensions 36 cm. , 42 cm. and 24 cm. If it is filled with small cubes of edge length 6 cm. , find the number of these cubes.  
 .....  
 .....
- (4) The following table shows the marks of 90 students in one month in math :

Marks	10 –	20 –	30 –	40 –	Total
Number of students	15	25	30	20	90

Draw the frequency curve for this distribution.



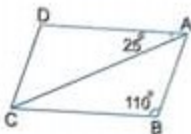




Answer the following questions :

1 Complete the following :

- (1) If  $\frac{x}{9} = 15\%$ , then  $x = \dots\dots\dots$
- (2) A rectangle will be a square if its diagonals are  $\dots\dots\dots$
- (3)  $\frac{3}{4} + 5\frac{1}{2} = 7 - \dots\dots\dots$
- (4) If the length of an insect in a picture is 10 cm. and its real length 2 mm. , then the drawing scale is  $\dots\dots\dots$
- (5) If  $A : B = 4 : 3$  ,  $B : C = 2 : 3$  , then  $A : C = \dots\dots\dots$
- (6) In the opposite figure :  
ABCD is a parallelogram , then :  
 $m(\angle ACD) = \dots\dots\dots^\circ$
- (7) 8 400 cm<sup>3</sup> of water is poured into a vessel in shape of cuboid with base area 700 cm<sup>2</sup> , then its height =  $\dots\dots\dots$  cm.
- (8) The number of sets = the range +  $\dots\dots\dots$
- (9) An agriculture tractor ploughs 28 feddans in 4 hours , then the rate of the tractor =  $\dots\dots\dots$  feddans/hour.



2 Choose the correct answer :

- (1) 9.52 litres =  $\dots\dots\dots$  dm<sup>3</sup> ( 9.52 or 95.2 or 9 520 or 95 200 )
- (2) The following data are descriptive data except  $\dots\dots\dots$   
( colour or age or birth place or blood type )
- (3) If the drawing scale  $\dots\dots\dots 1$  , this express enlargement.  
( > or = or < or  $\leq$  )
- (4) The sum of all edges of a cube is 132 cm. , Its volume =  $\dots\dots\dots$  cm<sup>3</sup>.  
( 11 or 33 or 121 or 1 331 )
- (5) 12 kirats : 1.25 feddan =  $\dots\dots\dots$  ( 5 : 2 or 2 : 5 or 1 : 2 or 120 : 125 )
- (6) If  $\frac{2}{5} = \frac{x}{15}$  , then  $x - 2 = \dots\dots\dots$  ( 4 or 5 or 6 or 15 )
- (7) The product of the extremes  $\dots\dots\dots$  The product of means.  
( > or = or < )



**3 Answer the following :**

- ( 1 ) A company for selling the electric sets shows a TV set for 2 300 L.E. , if the percentage of profit is 12 % Find the buying price of the TV set.

.....

.....

.....

.....

- ( 2 ) The ratio between the length and the width of a rectangle is 9 : 5 , if the perimeter of the rectangle is 56 cm. Find out the length and the width , then calculate its area.

.....

.....

.....

.....

**4 Choose the correct answer :**

- ( 1 )  $\frac{13}{20} = \dots\dots\dots\%$  ( 0.65 or 6.5 or 65 or 650 )

- ( 2 ) If the numbers 1 , 4 ,  $x$  , 28 are proportional , then  $x = \dots\dots\dots$   
( 1 or 4 or 7 or 28 )

- ( 3 ) The parallelogram with right angle is called .....  
( rectangle or square or rhombus or trapezium )

- ( 4 ) The ratio between the perimeter of a square and its side length = .....  
( 1 : 4 or 4 : 1 or 1 : 3 or 3 : 1 )

- ( 5 ) The range of the set of values (29 , 33 , 57 , 40 , 36 , 39) is .....  
( 28 or 32 or 33 or 86 )

- ( 6 ) 10 litres of water were poured in a vessel as a cuboid with square base of side length 25 cm. , then the height of water = ..... cm.  
( 400 or 40 or 16 or 2.5 )

**5 Answer the following :**

- ( 1 ) A cube shaped vessel , its internal edge is 30 cm. and it is filled with oil.

[a] Calculate the capacity of the vessel.

[b] If the price of one litre of oil is 9.5 pounds. Calculate the price of all oil.

.....

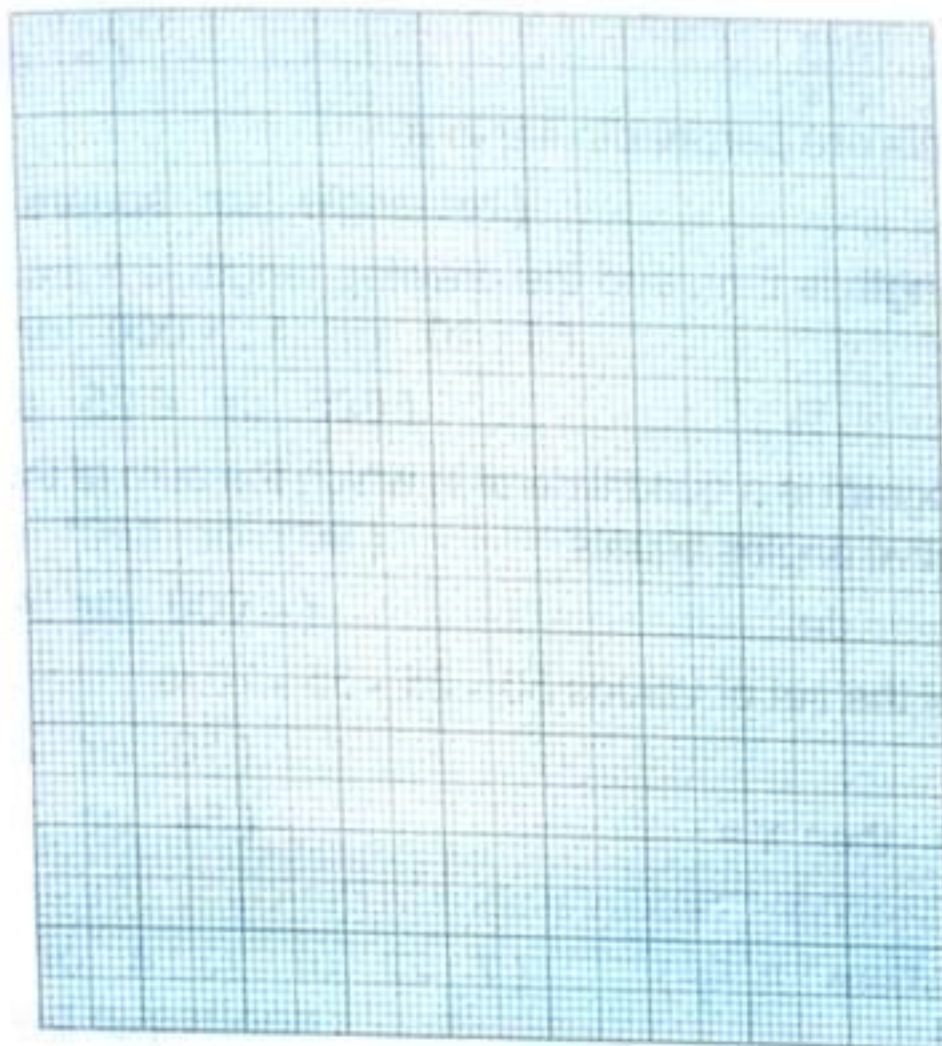
.....



- (2) The following table shows the distribution of the weekly wages of 60 workers in a factory :

Weekly wages	50 –	60 –	70 –	80 –	90 –	100 –	110 –	Total
No. of workers	6	8	12	18	10	4	2	60

- [a] Draw the frequency curve of the distribution.  
 [b] Find the percentage of workers whose weekly wages are 100 L.E. and more.




**10 Suez Governorate**

South Educational Directorate  
Maths Inspection



Answer the following questions :

- 1 Complete the following statements :

- (1) If the drawing scale  $< 1$  , this expresses .....
- (2)  $12.5\% = \frac{\dots\dots\dots}{\dots\dots\dots}$
- (3)  ..... (in the same pattern)
- (4)  $300 \text{ mm}^3 = \dots\dots\dots \text{ cm}^3$
- (5)  $16 \text{ kirat} : 2 \text{ feddans} = \dots\dots\dots : \dots\dots\dots$  (in the simplest form)
- (6) The number of sets =  $\frac{\text{the range}}{\dots\dots\dots}$
- (7) If  $A : B = 4 : 3$  ,  $B : C = 2 : 3$  , then  $A : C = \dots\dots\dots : \dots\dots\dots$
- (8) The area of the base of the cuboid =  $\frac{\dots\dots\dots}{\dots\dots\dots}$



- (9) A computer colour printer prints 12 papers each 4 minutes. The rate of work of this printer is .....

**2 Choose the correct answer :**

- (1) If  $\frac{4}{6} = \frac{12}{x}$ , then  $x + 2 = \dots\dots\dots$  (16 or 18 or 20 or 22)
- (2) The figure XYZL in which  $XY = ZL$ ,  $YZ = XL$ ,  $XY \neq YZ$ , the two diagonals are equal in length. The name of the figure is .....
- (rectangle or square or rhombus or cube)
- (3)  $\frac{432}{145} \dots\dots\dots \frac{513}{614}$  ( $>$  or  $<$  or  $=$  or  $\leq$ )
- (4) The diagonals are perpendicular in a .....
- (rectangle or square or parallelogram)
- (5) If the real length is 5 m. and the drawing length is 5 cm., then the drawing scale is .....
- (1 : 10 or 1 : 1 000 or 1 : 100 or 1 : 1)
- (6)  $0.625 = \dots\dots\dots \%$  (625 or 6.25 or 62.5 or 6 500)
- (7) The parallelogram is a quadrilateral in which the sum of the measures of any two consecutive angles equals .....
- ( $90^\circ$  or  $180^\circ$  or  $108^\circ$  or  $120^\circ$ )
- (8)  $4 \text{ m}^3 = \dots\dots\dots \text{ dm}^3$  (4 000 or 400 or 4 or 40)
- (9) The range of the set of values 50, 25, 35, 20 is .....
- (10 or 20 or 30 or 40)
- (10) If  $\frac{x+18}{9} = 8$ , then  $x = \dots\dots\dots$  (54 or 72 or 45 or 27)
- (11) The ratio between the circumference of the circle and its diameter length = .....
- (where :  $\pi \frac{22}{7}$ ) (7 : 22 or 13 : 4 or 22 : 7 or 4 : 13)
- (12)  $1 \dots\dots\dots \frac{4}{3}$  ( $>$  or  $<$  or  $=$  or  $\geq$ )
- (13) The following data are descriptive data except .....
- (favorite colour or age or birth place or blood species)

**3 Answer the following :**

- (1) In an English exam, Adel scored 13 marks from 20 marks, find the percentage of the scored mark of Adel in English.
- .....

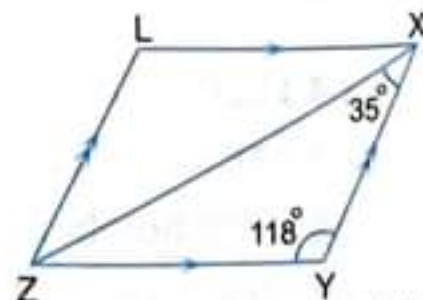
- (2) The sum of lengths of all edges of a cube is 132 cm. Calculate its volume.
- .....

- (3) In the opposite figure :

XYZL is a parallelogram in which  
 $m(\angle Y) = 118^\circ$ ,  $m(\angle YXZ) = 35^\circ$   
 Find :  $m(\angle L)$ ,  $m(\angle LXZ)$

.....

.....

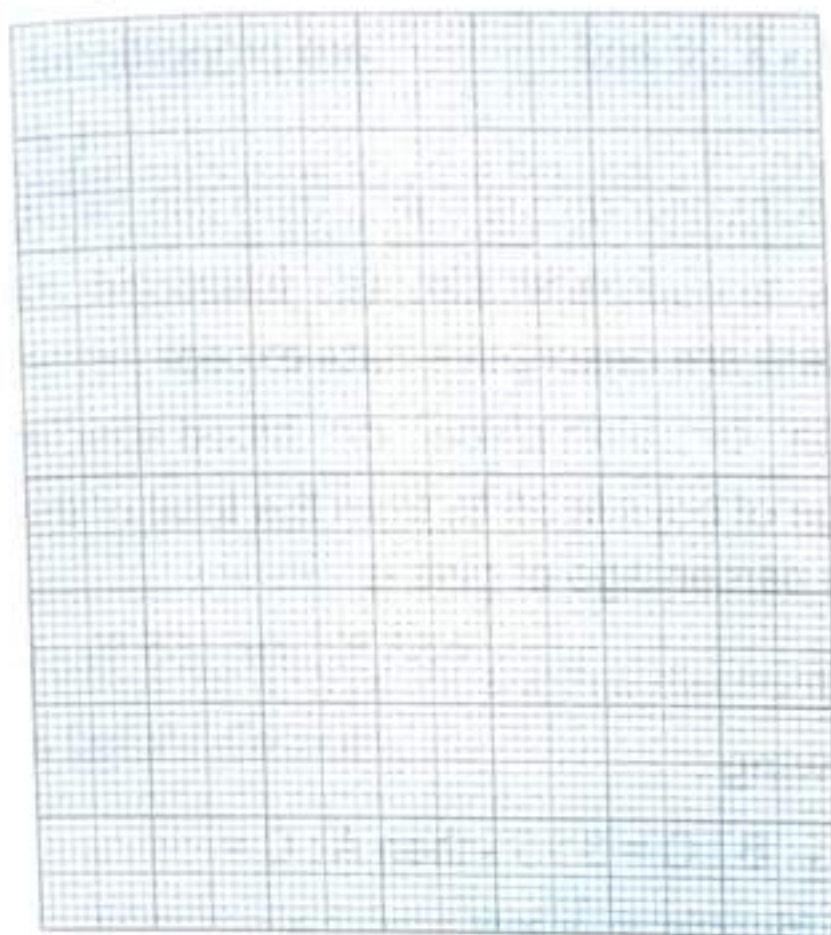




(4) The following table shows the marks of 100 students in math exam :

Marks	10 –	20 –	30 –	40 –	50 –	Total
Number of students	15	25	30	20	10	100

Draw the frequency curve for this distribution.



## 11 Port Said Governorate

Maths Inspector



Answer the following questions :

1 Choose the correct answer :

(1) The range of the set of values : 7 , 3 , 6 , 9 and 5 is .....

( 2 or 4 or 6 or 12 )

(2) The centimetre cube is a unit of measuring the .....

( length or area or volume or weight )

(3) 18 kirats : 2 feddans = ..... ( 1 : 2 or 3 : 8 or 1 : 24 or 18 : 2 )

(4) A printer prints 15 papers in 3 minutes , then the rate of printing of this printer = ..... papers/minute

( 5 or 3 or 45 or 0.5 )

(5) If the drawing scale  $< 1$  , this expresses .....

( equality or maximization or enlargement or minimization )

(6) The cube has ..... edges.

( 4 or 6 or 8 or 12 )

(7) The diagonals are perpendicular in .....

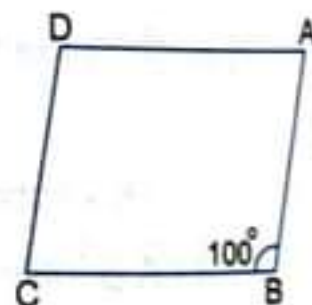
( rectangle or trapezoid or rhombus or parallelogram )



- ( 8 ) The ratio between side length of the square to its perimeter is .....  
 ( 1 : 2 or 1 : 3 or 4 : 1 or 1 : 4 )
- ( 9 ) If the ratio among the measurements of the angles of a triangle is 1 : 2 : 3 ,  
 then the measurement of the smallest angle is .....°  
 ( 10 or 20 or 30 or 60 )
- (10) The numbers 1 , 2 , 6 and ..... are proportional.  
 ( 2 or 6 or 8 or 12 )
- (11) If one angle of parallelogram is right , then it is called .....  
 ( rectangle or trapezoid or rhombus or cube )
- (12) The following data are descriptive data except .....  
 ( age or birth place or blood species or favourite colour )
- (13) If the percentage of boys is 35 % from the total of the number of pupils in a  
 class , then the percentage of girls is .....  
 ( 53 % or 65 % or 100 % or 135 % )

**2 Complete the following :**

- ( 1 ) If  $A : B = 2 : 3$  ,  $B : C = 3 : 5$  , then  $A : C =$  ..... : .....
- ( 2 ) The area of the triangle =  $\frac{1}{2} \times$  .....  $\times$  .....
- ( 3 ) If the real length of an insect is 0.3 mm. and its length in a picture is 4.5 cm.  
 , then the drawing scale = ..... : .....
- ( 4 )  $\frac{4}{5} =$  ..... %
- ( 5 ) 5 000 grams : 8 kilograms = ..... : ..... (in the simplest form)
- ( 6 ) A wooden box in the form of a cube , its external volume is  $1\,000\text{ cm}^3$  and  
 its capacity is  $729\text{ cm}^3$  , then the volume of wood of the box = .....  $\text{cm}^3$
- ( 7 ) If  $\frac{2}{5} = \frac{x}{15}$  , then  $x =$  .....
- ( 8 ) In the opposite figure :  
 ABCD is a parallelogram  
 , then  $m(\angle A) =$  .....°



- ( 9 ) The following table shows the marks of 50 students in one month in maths :

Marks	10 –	20 –	30 –	40 – 50	Total
Number of students	5	15	20	10	50

Then the number of students whose marks are less than 40  
 is ..... students.



Answer the following :

(1) A metallic cube of edge length 12 cm. It needs to be converted it into ingots in the shape of cuboid each of them of dimensions 3 cm. , 4 cm. and 6 cm. Calculate the number of ingots that are obtained.

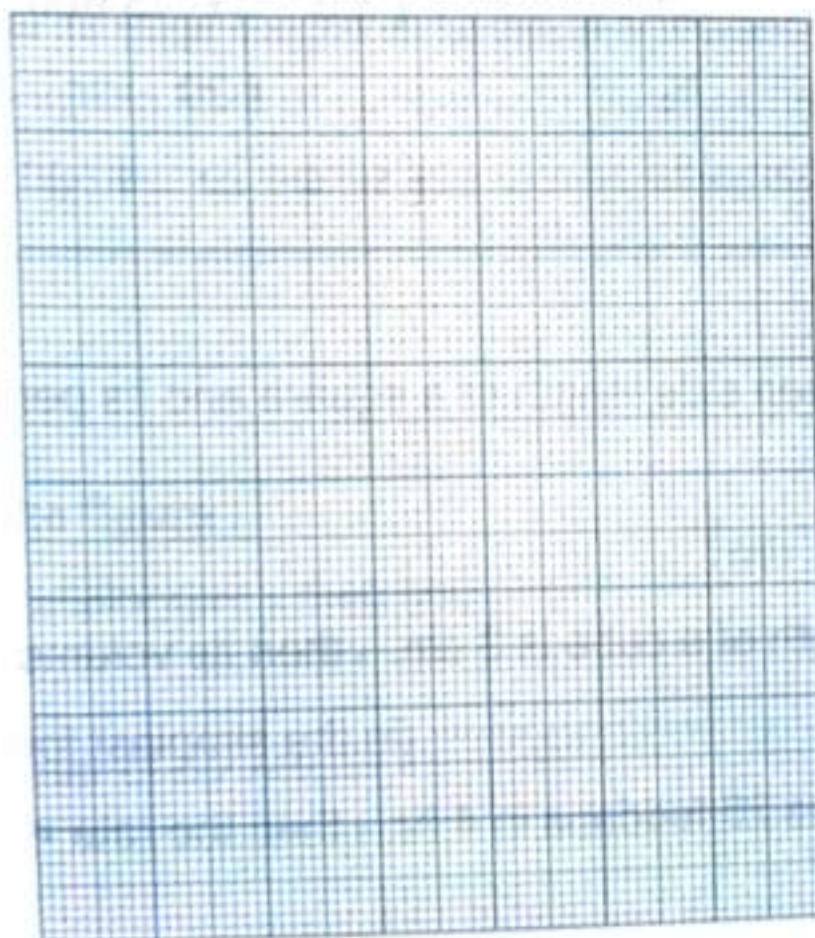
(2) Three persons started in business , the first paid 15 000 pounds , the second paid 25 000 pounds and the third paid 20 000 pounds , at the end of the year , the profit was 5 520 pounds. Calculate the share of each of them.

(3) Mariam bought a dress for 425 pounds with a discount 15 % Calculate the price of the dress before discount.

(4) The following table shows the marks of 100 students in one month in maths test :

Marks	10 –	20 –	30 –	40 – 50	Total
Number of students	15	30	40	15	100

Draw the frequency curve of this distribution.





12

## El-Menia Governorate

Meghegha Educational Directorate  
St. Mark & El Tawfik Schools

Answer the following questions :

1 Choose the correct answer :

- (1)  $\frac{1}{2}$  kg. .... 700 gm. ( $<$  or  $>$  or  $=$  or  $\geq$ )
- (2) If  $\frac{5}{x} = \frac{10}{14}$ , then  $x =$  ..... (10 or 14 or 2 or 7)
- (3) The cube has ..... edges. (10 or 12 or 8 or 11)
- (4) The diagonals are equal in length in .....  
(parallelogram or rectangle or rhombus or trapezium)
- (5) The following data are descriptive except .....  
(colour or birth place or age or name)
- (6) Volume of cuboid whose dimensions are 3 cm. , 2 cm.  
and 5 cm. = .....  $\text{cm}^3$ . (30 or 9 or 25 or 60)
- (7) Range of set of values 7 , 3 , 6 , 9 and 5 = .....  
(3 or 4 or 6 or 17)
- (8)  $\frac{3}{4} =$  ..... % (34 or 75 or 57 or 0.53)
- (9)  $a : b = 3 : 4$  ,  $b : c = 3 : 5$  , then  $a : c =$  ..... ; .....  
(9 : 20 or 2 : 3 or 3 : 5 or 3 : 2)
- (10) 3.6 litres = .....  $\text{cm}^3$ . (3.6 or 3 600 or 360 or 0.36)
- (11)  $1 - 70\% =$  ..... % (30 or 32 or 50 or 20)
- (12)  $\frac{1}{4} : \frac{1}{3} =$  ..... ; ..... (1 : 4 or 1 : 3 or 3 : 4 or 4 : 3)

2 Complete :

- (13) The ratio between side length of a square and its perimeter  
= ..... ; .....
- (14)  $4 \text{ m}^3 =$  .....  $\text{dm}^3$ .
- (15) If the edge length of a cube is 3 cm. , then its volume = .....  $\text{cm}^3$ .
- (16) 8 hr. : 3 days = ..... ; ..... (in the simplest form).
- (17) A tractor ploughs 28 feddans in 4 hr. , then the rate = ..... feddans/hr.



- (18) The volume of cuboid  $64 \text{ cm}^3$  and area of its base is  $16 \text{ cm}^2$ , then its height  
= .....
- (19)  $30\%$  of  $200 = \dots\dots\dots$
- (20) If drawing length is  $6 \text{ cm}$ . and the real length is  $6 \text{ m}$ . , then the drawing  
scale = .....

5 Answer the following :

- (21) If ratio between Hani and Maged weights is  $5 : 6$  and the difference between their weights is  $10 \text{ kg}$ . Find the weight of each of them.
- .....
- .....
- .....
- .....
- .....

- (22) Dina bought a mobile for  $1\,800 \text{ L.E.}$  with a discount  $10\%$  Calculate the price of the mobile before the discount.
- .....
- .....
- .....
- .....
- .....

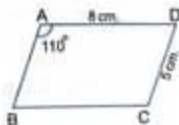
- (23) A cube of metal its edge length is  $12 \text{ cm}$ . If it is wanted to be melted and converted into ingots form of cuboid with dimensions  $3 \text{ cm}$ ,  $4 \text{ cm}$ . and  $6 \text{ cm}$ . Calculate the number of ingots that can be obtained.
- .....
- .....
- .....

- (24) In the opposite figure :

ABCD is a parallelogram , then find :

[a]  $m(\angle C) = \dots\dots\dots^\circ$

[b] The perimeter of  $\square ABCD = \dots\dots\dots$

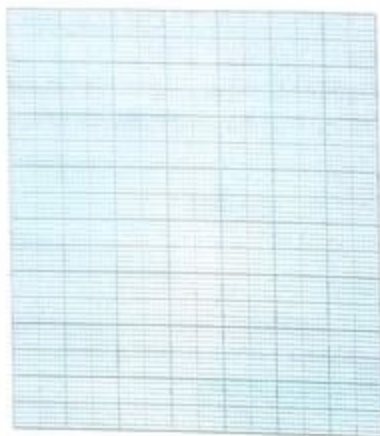




- (25) The following table shows marks of 50 students in maths test :

Marks	10 –	20 –	30 –	40 –	50 –	Total
No. of students	8	14	12	10	6	50

Draw the frequency curve of this distribution.



13

Souhag Governorate

Maths Supervision



Answer the following questions :

- 1 Choose the correct answer :

- (1) The side length of a square = 3 cm. , then the ratio between its side length and its perimeter equals ..... ( 4 or 3 or  $\frac{1}{4}$  or  $\frac{1}{3}$  )
- (2) If the volume of a cube =  $125 \text{ cm}^3$  , then its base area = ..... (  $25 \text{ cm}^2$  or 25 cm. or  $5 \text{ cm}^2$  or 5 cm. )
- (3) If  $\frac{2}{7} = \frac{x-3}{21}$  , then  $x =$  ..... ( 6 or 9 or 12 or 3 )
- (4) If Hoda bought a mobile phone for 900 pounds with a discount 10 % , then the price of the mobile phone before the discount is ..... pounds. ( 9 000 or 1 000 or 990 or 100 )
- (5) The diagonals are perpendicular in a ..... ( rectangle or trapezium or rhombus or parallelogram )
- (6)  $\frac{24}{5} =$  ..... (  $4\frac{1}{5}$  or  $3\frac{2}{5}$  or  $4\frac{4}{5}$  or  $2\frac{4}{5}$  )



(7) In the opposite figure :  
The number of  
trapezoids is .....



( 3 or 4 or 5 or 2 )

(8) If 100 grams from a food stuff gives 300 calories , how many calories will be given from 30 grams of this food ? ( 900 or 9 000 or 90 or 100 )

(9) If the sum of the edge lengths of a cube = 144 cm. , then its volume = .....  
( 144 cm<sup>3</sup> or 1 728 cm. or 1 728 cm<sup>3</sup> or 144 cm<sup>2</sup> )

(10)  $1 - (35\% + 25\%) = \dots\dots\dots$  (  $\frac{1}{2}$  or  $\frac{1}{3}$  or  $\frac{2}{5}$  or  $\frac{3}{4}$  )

(11)  $\frac{513}{614} \dots\dots\dots \frac{432}{145}$  ( < or > or = or  $\geq$  )

(12) The ratio between 3 feddans : 24 kirats = .....  
( 3 : 2 or 3 : 1 or 1 : 8 or 1 : 4 )

(13) The following data are descriptive except .....  
( favorite colour or birth place or age or blood species )

**2 Complete each of the following :**

- (1)  $1.5 \text{ litres} + 0.5 \text{ dm}^3 + 500 \text{ cm}^3 = \dots\dots\dots$  litres.
- (2) The capacity is the volume of the inner space for any .....
- (3) If the drawing scale  $< 1$  , then this expresses .....
- (4) The rectangle is a parallelogram .....
- (5)  $900 \text{ mm}^3 = \dots\dots\dots \text{ cm}^3$
- (6) If the real length of an insect is 0.3 mm. and its length in a picture is 4.5 cm. , then the drawing scale = .....
- (7) ..... is a cuboid with equal dimensions.
- (8) The four sides are equal in length in each of ..... , .....
- (9) The volume of a cuboid is  $64 \text{ cm}^3$  and the area of its base is  $16 \text{ cm}^2$  , then its height = ..... cm.

**3 Answer the following questions :**

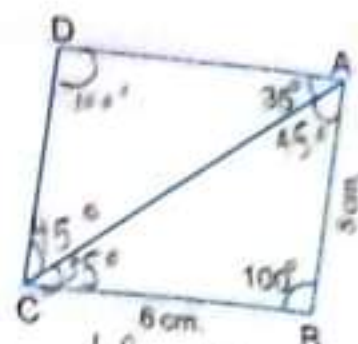
- (1) A man died and left a piece of land for building its area is 17 kirats we recommended for building on orphan house on area equals 5 kirats , the remainder is distributed between his son and his daughter in the ratio 2 : 1 , calculate the share of each of them from the land.



•  $BC = 6$  cm.  $m(\angle B) = 100^\circ$  and  $m(\angle DAC) = 35^\circ$   
• without using measuring tools, find :

**[b]**  $m(\angle ACD) = \dots 115^\circ$

[c] The perimeter of the parallelogram ABCD = 22 cm.



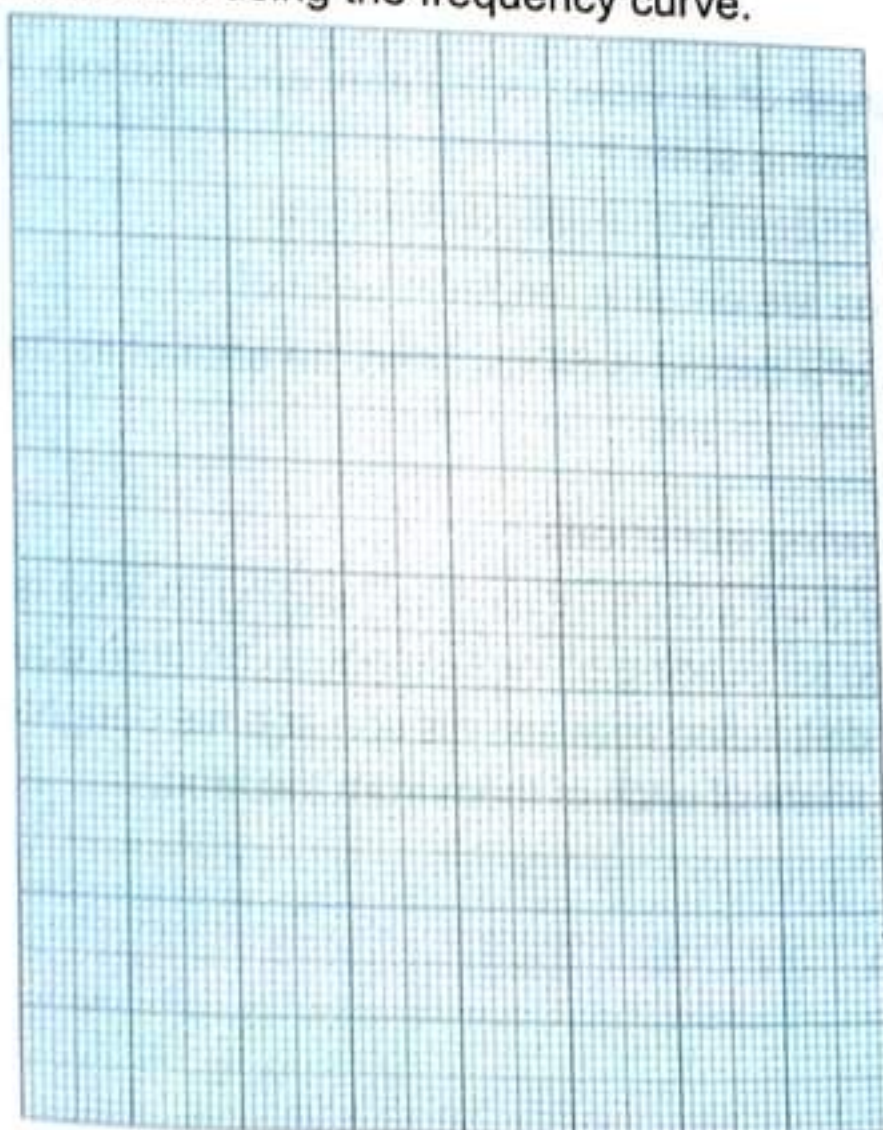
(3) Heba bought a mobile phone for 2 185 pounds with a discount 5 % , calculate the price of the mobile phone before the discount.

(4) A restaurant owner prepares 80 food meals, all are of the same kind, using 20 kg. of meat, what is the rate of meat needed for preparing one meal, what is the rate of meat needed for preparing 4 meals?

(5) The following table shows the number of hours which are spent by 60 pupils to study their lessons daily :

Number of hours	1 –	2 –	3 –	4 –	5 – 6	Total
Number of pupils	9	13	18	12	8	60

Represent these data using the frequency curve.





## Luxor Governorate

Arment Educational Zone  
Math Supervision

14 Answer the following questions :

## 1 Complete :

- (1) The range of the set of values = the maximum value - .....
- (2) The volume of the cuboid = .....  $\times$  .....
- (3)  $15 \text{ dm}^3 = \dots\dots\dots \text{ cm}^3$
- (4) The two diagonals are perpendicular in each of ..... and .....
- (5) The ratio between two numbers  $125 : 25 = \dots\dots\dots$  : .....  
(in the simplest form)
- (6)  $2.5 \text{ feddans} : 18 \text{ kirats} = \dots\dots\dots$  : ..... (in the simplest form)
- (7)  $0.4 = \dots\dots\dots \%$
- (8) If  $A : B = 5 : 9$  ,  $B : C = 9 : 11$  , then  $A : C = \dots\dots\dots$  : .....
- (9) The drawing scale =  $\frac{\dots\dots\dots}{\dots\dots\dots}$

## 2 Choose the correct answer :

- (1) The four sides are equal in length in .....  
( triangle **or** rhombus **or** parallelogram **or** trapezium )
- (2)  $2.5 : 5.75 = \dots\dots\dots$  : .....  
(  $10 : 13$  **or**  $23 : 10$  **or**  $25 : 575$  **or**  $10 : 23$  )
- (3) The volume of a cuboid is  $81 \text{ cm}^3$  and the area of its base is  $27 \text{ cm}^2$  , then its height = .....  
(  $24 \text{ cm.}$  **or**  $3 \text{ cm.}$  **or**  $2 \text{ cm.}$  **or**  $4 \text{ cm.}$  )
- (4) The ratio between the perimeter of the square and its side length = ..... : .....  
(  $1 : 2$  **or**  $1 : 3$  **or**  $4 : 1$  **or**  $2 : 1$  )
- (5) The ratio between the child's age and his father's age =  $2 : 15$  , if the child's age is 6 years , then his father's age = ..... years.  
(  $45$  **or**  $30$  **or**  $39$  **or**  $53$  )
- (6)  $46 \text{ dm}^3 = \dots\dots\dots$  litres.  
(  $46 \text{ 000}$  **or**  $0.064$  **or**  $46$  **or**  $6 \text{ 400 000}$  )
- (7) Hassan spends L.E. 70 within a week , then the rate of what Hassan spends daily = .....  
(  $15 \text{ L.E./day}$  **or**  $10 \text{ L.E./day}$  **or**  $5 \text{ L.E./day}$  **or**  $7.5 \text{ L.E./day}$  )
- (8) The sum of edge lengths of a cube =  $48 \text{ cm.}$  , then its volume = .....  $\text{cm}^3$ .  
(  $26$  **or**  $216$  **or**  $729$  **or**  $64$  )



- (9) The following data are descriptive data except  
( age or blood specie or favorite food or birth place )
- (10) If the numbers 4,  $x$ , 12, 18 are proportional, then  $x =$   
( 2 or 3 or 4 or 6 )
- (11) If the drawing scale ..... 1, this expresses maximization,  
( > or = or < )
- (12) Ahmed bought a car for L.E. 50 000 and sold it by profit 10 %, then the selling price = L.E. ....  
( 45 000 or 55 000 or 75 000 or 2 000 )
- (13) The range of the set of values 7, 3, 6, 9 and 5 is .....  
( 4 or 5 or 6 or 7 )

**3 Answer the following :**

- (1) If the drawing scale of a map is 1 : 1 500 000, and the distance between two cities on this map = 3 cm., find the real distance between them in km.  
.....  
.....  
.....
- (2) Three persons started in business. The first paid L.E. 1 500, the second paid L.E. 2 500 and the third paid L.E. 2 000, at the end of the year the net profit = L.E. 6 000 Calculate the share of each one of them.  
.....  
.....  
.....

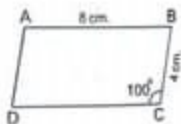
**(3) In the opposite figure :**

ABCD is a parallelogram in which  $AB = 8$  cm.,  
BC = 4 cm., and  $\angle C = 100^\circ$

Find :

[a]  $m \angle ADC =$  .....

[b] The perimeter of the parallelogram ABCD = .....



- (4) The following table shows the number of the hours which spent by 20 pupils to study their lessons daily :

Number of hours	1 -	2 -	3 -	4 -	5 - 6	Total
Number of pupils	1	6	3	7	3	20

Represent this data by using the frequency curve.



15

## Aswan Governorate

Education Administration  
El-Salam Primary School

Answer the following questions :

1 Choose the correct answer :

- (1) The ratio between the length of the side of the equilateral triangle and its perimeter =  $\frac{1}{3}$  ( 1 : 1 or 1 : 3 or 1 : 4 or 1 :  $\pi$  )
- (2) Hassan spends L.E. 45 within three days , then rate =  $\frac{15}{\text{day}}$  ( 12 or 13 or 14 or 15 )
- (3) If the drawing scale  $> 1$  , this expresses  $\frac{1}{2}$  ( minimization or enlargement or equality or congruent )
- (4) In one of the classes the number of boys is 15 and the number of girls is 20 pupils , then the ratio between number of boys and the number of girls =  $\frac{3}{4}$  ( 1 : 4 or 1 : 2 or 1 : 3 or 3 : 4 )
- (5) The volume of a cube of edge length 2 cm. =  $8 \text{ cm}^3$  ( 8 or 16 or 34 or 60 )
- (6) 3 litres =  $3000 \text{ cm}^3$  ( 3 or 300 or 3 000 or 9 000 )
- (7)  $75\% = \frac{3}{4}$  (  $\frac{1}{4}$  or  $\frac{1}{2}$  or  $\frac{3}{4}$  or  $\frac{5}{3}$  )
- (8) If  $\frac{2}{3} = \frac{10}{x}$  , then  $x = 15$  ( 6 or 15 or 20 or 25 )
- (9) If one of the angles of a parallelogram is right , then its called rectangle ( rectangle or rhombus or square or cube )
- (10)  $0.35 = \frac{35}{100} = 35\%$  ( 35 or 3.5 or 0.35 or 0.37 )



- (11) If the real length is 6 m. and the drawing length is 6 cm. , then the drawing scale is ..... ( 1 : 10 or 1 : 100 or 1 : 500 or 1 : 1 000 )
- (12) The following data are descriptive data except .....  
( favourite colours or age or name or blood species )
- (13) If the shirt with price L.E. 120 at 20 % discount , then the value of discount = L.E. .... ( 15 or 24 or 30 or 40 )

**2 Complete the following :**

- ( 1 ) A company for selling electric sets , it shows a TV set for L.E. 2 100 , if the percentage of the profit is 12 % , then the buying price of the TV set = .....

- ( 2 ) In the following table :

Sets	10 -	20 -	30 -
Frequency	4	6	2

The centre of the set ( 10 - ) = .....

- ( 3 ) There are 560 students , if the ratio between numbers of girls to the number of boys is 3 : 5 , then the number of girls = ..... girls.
- ( 4 ) The ratio between  $\frac{1}{2} : \frac{3}{5} = \dots\dots\dots$
- ( 5 ) 0.6 = ..... %
- ( 6 )  $\bigcirc \triangle \square \bigcirc \triangle \square \dots\dots\dots$  (in the same pattern)
- ( 7 ) If the numbers 6 , 8 , 3 , x are proportional , then the value of x = .....
- ( 8 ) A cuboid of base area is  $16 \text{ cm}^2$  and its height is 5 cm. , then the volume = .....  $\text{cm}^3$ .
- ( 9 ) The range of the set of values 50 , 25 , 35 , 20 = .....

**3 Answer the following questions :**

- ( 1 ) Khaled bought a flat for L.E. 150 000 , he sold it at 5 % loss. Calculate the selling price.

.....

.....

.....

.....

.....



- (2) A triangular piece of land the ratio between lengths of its sides 4 : 6 : 7  
 if the perimeter of this piece of land is 51 metres.  
 Find the lengths of sides of piece of land.

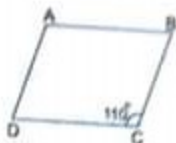
- (3) In the opposite figure :

ABCD is a parallelogram in which

$$m(\angle C) = 110^\circ$$

Find : [a]  $m(\angle A) = \dots\dots\dots^\circ$

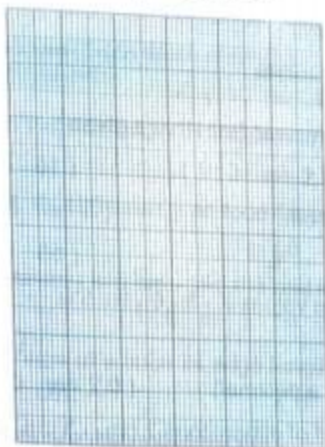
[b]  $m(\angle B) = \dots\dots\dots^\circ$



- (4) The following table shows the marks of 100 students in maths exam :

Marks	10 -	20 -	30 -	40 - 50
Number of students	15	30	40	15

Represent these data by a frequency curve.





# Answers of Schools' Examinations for the Year 2020

## **1** Cairo

- 1 (1) 1 : 4 (2) 6 (3) 500  
(4) 8 (5) 6 : 4 : 3 (6) 1 000  
(7) 1 : 1 (8) 1 : 4 (9) 400  
(10) favorite color (11)  $\frac{1}{2}$   
(12) 1 (13)  $\frac{1}{2}$

- 2 (1) 1 : 2 (2) 6 (3) 100  
(4) 100 (5) 3  
(6) [a] 80° [b] 5 : 4 [c] 20  
[d] rhombus

- 3 (1) Price before discount : Discount : Price after discount  
100 % : 10 % : 90 %  
? : : 1 800

The price before discount

$$= \frac{100 \times 1\,800}{90} = 2\,000 \text{ pounds.}$$

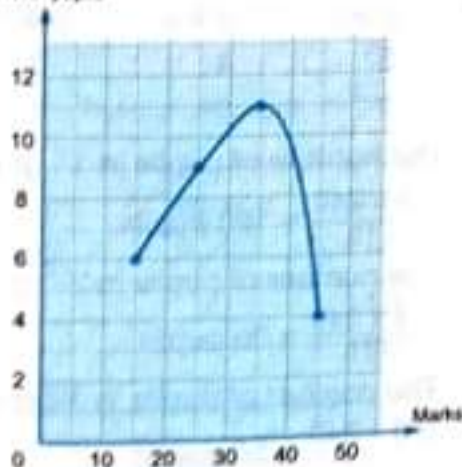
- (2) The capacity =  $40 \times 30 \times 1.8$   
 $= 2\,160 \text{ m}^3 = 2\,160\,000 \text{ L}$

- (3) Length in drawing : Length in reality

$$\begin{array}{ccc} 1 & : & 600\,000 \\ 4 & : & ? \end{array}$$

$$\begin{aligned} \text{The real distance} &= \frac{600\,000 \times 4}{1} \\ &= 2\,400\,000 \text{ cm.} \\ &= 24 \text{ km.} \end{aligned}$$

- (4) No. of pupils



## **2** Cairo

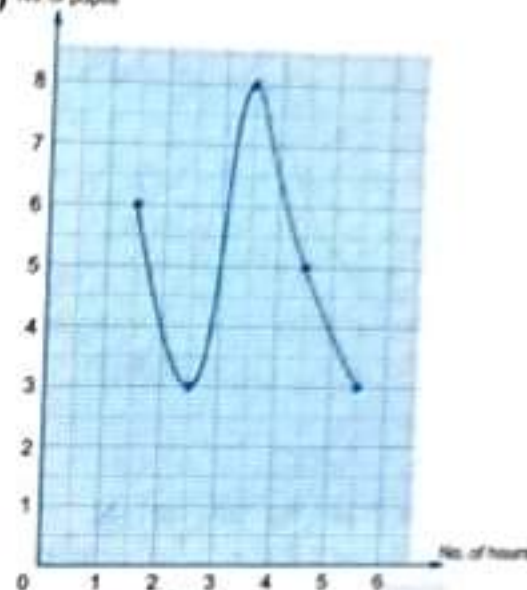
- 1 (1) 5 : 7 (2) rectangle (3) 50  
(4) 8 (5) 1 : 400 (6) 35  
(7) 8 (8) 6 (9) 46  
(10) 72 (11)  $4\frac{4}{5}$  (12) =  
(13) age

- 2 (14) 3 : 8 (15) 45° (16) parallelogram  
(17) 20 (18) 1 : 300 000  
(19) 60 (20) 3 (21) 3 (22) 64

- 3 (23)  $m(\angle A) = 130^\circ$ ,  $m(\angle ABD) = 20^\circ$   
(24) The rate =  $\frac{21}{7} = 3 \text{ hr./day}$   
(25) Price before discount : Discount : Price after discount  
100 % : 5 % : 95 %  
? : : 7 600

$$\begin{aligned} \text{The price before discount} &= \frac{100 \times 7\,600}{95} \\ &= \text{L.E. } 8\,000 \end{aligned}$$

- (26) No. of pupils



## **3** Giza

- 1 (1) < (2) 1 : 2 (3) 5  
(4) 90° (5) 40 (6) 0.3  
(7) age (8) 54 (9) 1 : 300 000  
(10) 8 : 15 (11) 67 (12) 216  
(13) 9

- 2 (1) an equality of two ratios or more  
(2) rhombus (3) 9 (4) 17  
(5) 40 (6)  $\frac{2}{25}$  litre / km.  
(7) enlargement (8)  $40^\circ + 110^\circ$   
(9) 14

- 3 (1) 1<sup>st</sup> angle : 2<sup>nd</sup> angle : 3<sup>rd</sup> angle : Sum  
1 : 2 : 3 : 6  
? : ? : ? : 180°

$$\text{The measure of 1<sup>st</sup> angle} = \frac{1 \times 180^\circ}{6} = 30^\circ$$

$$\text{The measure of 2<sup>nd</sup> angle} = \frac{2 \times 180^\circ}{6} = 60^\circ$$

$$\text{The measure of 3<sup>rd</sup> angle} = \frac{3 \times 180^\circ}{6} = 90^\circ$$



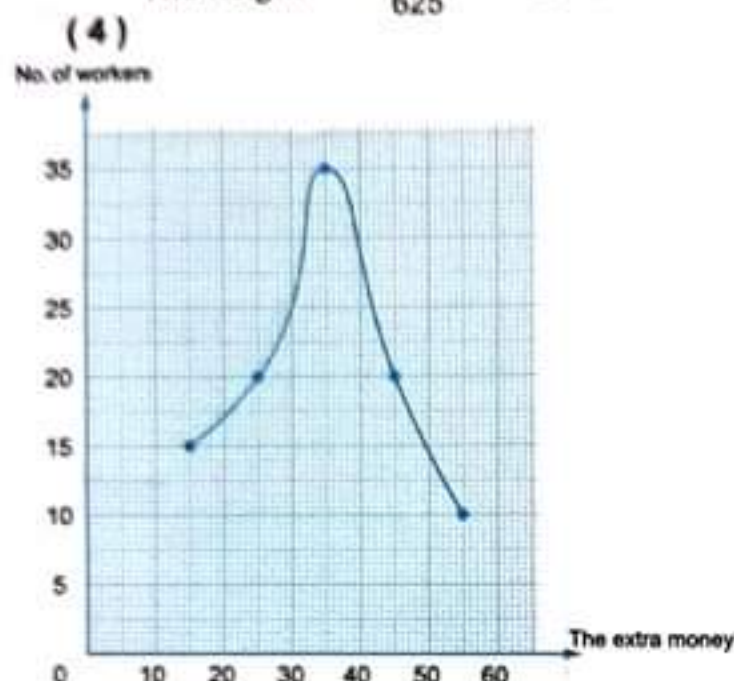
(2) Buying price : Profit : Selling price  
 100 % : 6 % : 106 %  
 ? : ? : 3 180

$$\text{The buying price} = \frac{100 \times 3\,180}{106} \\ = \text{L.E. } 3\,000$$


$$\text{The profit} = 3\,180 - 3\,000 = \text{L.E. } 180$$

(3) The base area =  $25 \times 25 = 625 \text{ cm}^2$

$$\text{The height} = \frac{10 \times 1\,000}{625} = 16 \text{ cm.}$$



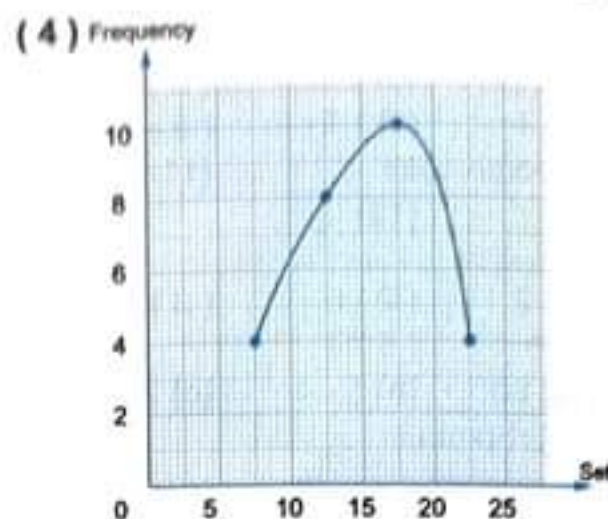
## 4 Giza

- 1 (1) blood species (2) 1 : 2  
 (3) 35 (4)  (5) 6  
 (6) 40 (7) 9 : 10 (8) rectangle  
 (9)  $A \times D = B \times C$  (10) 120  
 (11) = (12) 1 : 1 (13) volume


- 2 (1) 3 : 8 (2) 2 : 5 (3) 25  
 (4) 80 (5) 20 : 1  
 (6) rectangle, square (7) 6  
 (8)  $60^\circ$  (9) 216

- 3 (1) 1<sup>st</sup> piece : 2<sup>nd</sup> piece : Sum  
 6 : 8 : 14  
 ? : ? : 126  
 The length of 1<sup>st</sup> piece =  $\frac{6 \times 126}{14} = 54 \text{ cm.}$   
 The length of 2<sup>nd</sup> piece =  $\frac{8 \times 126}{14} = 72 \text{ cm.}$   
 (2) The base area =  $3 \times 3 = 9 \text{ cm}^2$   
 The height =  $\frac{54}{9} = 6 \text{ cm.}$

(3) Before interest : Interest : After interest  
 100 % : 10 % : 110 %  
 3 000 : : ?  
 The money after one year =  $\frac{110 \times 3\,000}{100} = \text{L.E. } 3\,300$



## 5 Alexandria

- 1 (1) 1 : 4 (2) 1 : 3 (3) 3  
 (4) 24 (5) 33 (6) 55.25  
 (7) 0.75 (8)  $90^\circ$  (9)   
 (10) 700 500 (11) volume (12) birth place  
 (13) -

- 2 (1) ratio (2) 2 : 5 (3) 1 200  
 (4) 1 : 3 (5) 175 (6)  $180^\circ$   
 (7) 1 000 (8) 1 331 (9) 40

- 3 (1) 1<sup>st</sup> grade : 2<sup>nd</sup> grade : 3<sup>rd</sup> grade : Sum  
 5 : 4 : 3 : 12  
 ? : ? : ? : 240

$$\text{The number of pupils in 1<sup>st</sup> grade} \\ = \frac{5 \times 240}{12} = 100 \text{ pupils.}$$

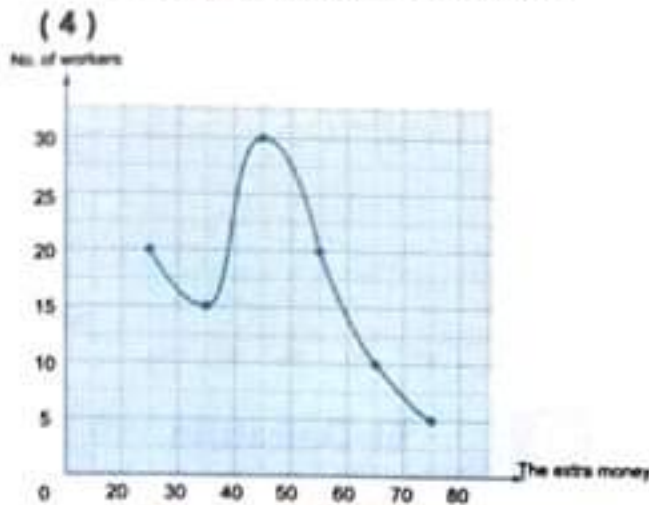
$$\text{The number of pupils in 2<sup>nd</sup> grade} \\ = \frac{4 \times 240}{12} = 80 \text{ pupils.}$$

$$\text{The number of pupils in 3<sup>rd</sup> grade} \\ = \frac{3 \times 240}{12} = 60 \text{ pupils.}$$

- (2) Length in drawing : Length in reality  
 1 : 1 100 000  
 15 : ?  
 The real length =  $\frac{1\,100\,000 \times 15}{1} = 16\,500\,000 \text{ cm.}$   
 = 165 km.



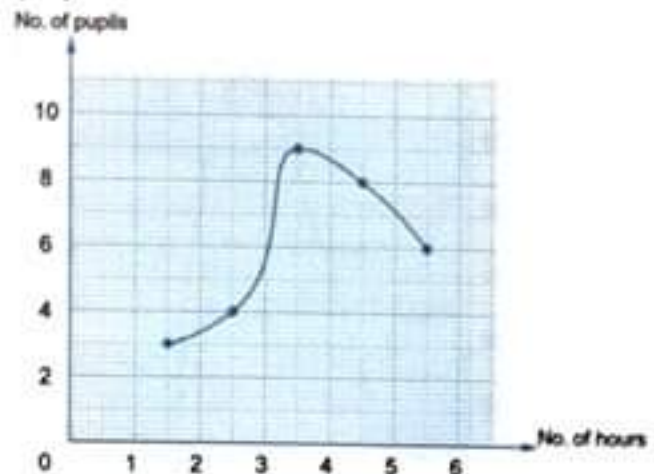
- (3) The volume of the vessel  
 $= 20 \times 35 \times 45 = 31\,500 \text{ cm}^3$   
 The volume of water needed  
 $= 31\,500 - 8\,400 = 23\,100 \text{ cm}^3$



## 6 El-Kalyoubia

- 1 (1) 0.75 (2) 12 (3) 20  
 (4) 1 : 100 (5) 6 (6) 6  
 (7) 6 (8)  $100^\circ$  (9) 50  
 (10) square (11) 30 (12) age  
 (13)  $\square \bigcirc \triangle$
- 2 (1) 5 : 8 (2) 4 (3)  $80^\circ$   
 (4) 3 000 (5) 271 (6) 23  
 (7) 2 : 5 (8) 1 : 4  
 (9) base length  $\times$  corresponding height
- 3 (1) Price before discount : Discount : Price after discount  
 $100\% : 15\% : 85\%$   
 $? : : 680$   
 The price before discount  $= \frac{100 \times 680}{85}$   
 $= 800$  pounds.
- (2) 1<sup>st</sup> person : 2<sup>nd</sup> person : Sum  
 $5\,000 : 8\,000 : (+1\,000)$   
 $5 : 8 : 13$   
 $? : ? : 3\,900$   
 The share of the 1<sup>st</sup> person  
 $= \frac{5 \times 3\,900}{13} = 1\,500$  pounds.  
 The share of the 2<sup>nd</sup> person  
 $= \frac{8 \times 3\,900}{13} = 2\,400$  pounds.
- (3) The volume of the cube  $= 12 \times 12 \times 12$   
 $= 1\,728 \text{ cm}^3$   
 The volume of each ingot  $= 3 \times 4 \times 6$   
 $= 72 \text{ cm}^3$   
 The number of ingots  $= 1\,728 \div 72 = 24$  ingots.

(4)

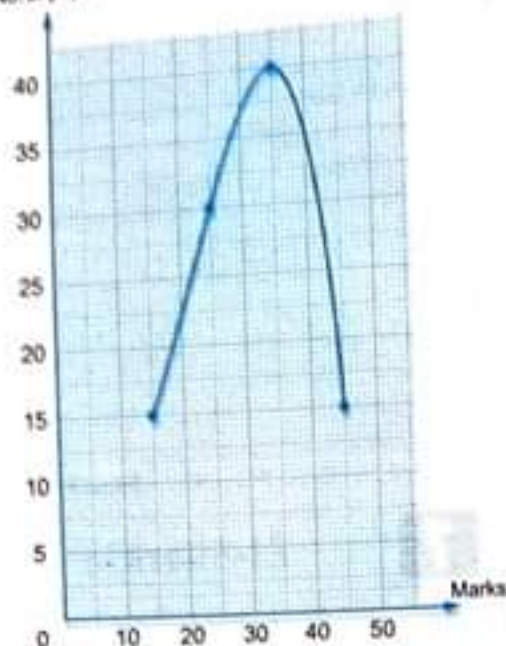


## 7 El-Sharkia

- 1 (1) 3 000 (2) 7 (3) 100  
 (4) 2 : 3 (5) 6  
 (6) rectangle (7) 3 : 4 (8) 1 : 5  
 (9) minimization (10) 11  
 (11) 1 : 4 (12) length
- 2 (1) 75 (2) 45 (3) 4  
 (4) 8 (5) 1 : 200 (6) 5 : 8  
 (7) 7 feddans/hr. (8) 3 : 10
- 3 (1) Buying price : Profit : Selling price  
 $100\% : 10\% : 110\%$   
 $60\,000 : : ?$   
 The selling price  $= \frac{110 \times 60\,000}{100}$   
 $= \text{L.E. } 66\,000$
- (2) The number of bottles  $= \frac{24 \times 1\,000}{400}$   
 $= 60$  bottles.
- (3) [a]  $m(\angle D) = 130^\circ$   
 [b]  $m(\angle ACD) = 30^\circ$
- (4) 1<sup>st</sup> angle : 2<sup>nd</sup> angle : 3<sup>rd</sup> angle : Sum  
 $3 : 7 : 8 : 18$   
 $? : ? : ? : 180^\circ$   
 The measure of 1<sup>st</sup> angle  $= \frac{3 \times 180^\circ}{18}$   
 $= 30^\circ$   
 The measure of 2<sup>nd</sup> angle  $= \frac{7 \times 180^\circ}{18}$   
 $= 70^\circ$   
 The measure of 3<sup>rd</sup> angle  $= \frac{8 \times 180^\circ}{18}$   
 $= 80^\circ$



(5) No. of pupils



## 8 El-Monofia

- 1 (1) 5 : 8 (2) 65 (3) 6  
(4) 200 (5) weight (6) 120  
(7) 60 (8) 60 (9) 1 : 100  
(10) 30 (11) square (12) 5 : 3  
(13) 80

- 2 (1) 125 (2) 28  
(3) length in drawing, length in reality  
(4) 41 (5) descriptive, quantitative  
(6) 120° (7) 9 (8) 6

- 3 (1) Length in drawing : Length in reality

$$\begin{array}{lcl} 1 & : & 1\,000\,000 \\ ? & : & 20\text{ km.} \end{array}$$

The distance on the map

$$= \frac{1 \times 20 \times 100\,000}{1\,000\,000} = 2\text{ cm.}$$

- (2) Price before discount : Discount : Price after discount

$$\begin{array}{lcl} 100\% & : & 20\% : 80\% \\ 2\,500 & : & ? \end{array}$$

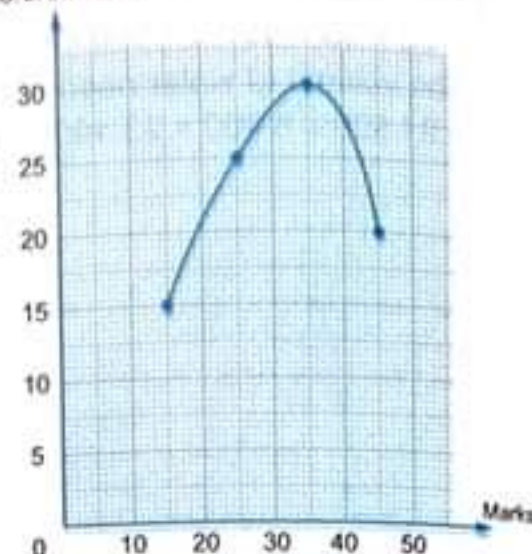
$$\begin{aligned} \text{The price after discount} &= \frac{80 \times 2\,500}{100} \\ &= 2\,000\text{ pounds.} \end{aligned}$$

- (3) The volume of cuboid =  $36 \times 42 \times 24$   
 $= 36\,288\text{ cm}^3$

$$\begin{aligned} \text{The volume of each cube} &= 6 \times 6 \times 6 \\ &= 216\text{ cm}^3 \end{aligned}$$

$$\begin{aligned} \text{The number of cubes} &= 36\,288 \div 216 \\ &= 168\text{ cubes.} \end{aligned}$$

(4) No. of students



## 9 El-Dakahlia

- 1 (1) 1.35 (2) equal in length  
(3)  $\frac{3}{4}$  (4) 50 : 1 (5) 8 : 9  
(6) 45 (7) 12  
(8) the length of the set (9) 7

- 2 (1) 9.52 (2) age (3) >  
(4) 1 331 (5) 2 : 5 (6) 4  
(7) =

- 3 (1) Buying price : Profit : Selling price

$$\begin{array}{lcl} 100\% & : & 15\% : 115\% \\ ? & : & 2\,300 \end{array}$$

$$\begin{aligned} \text{The buying price} &= \frac{100 \times 2\,300}{115} \\ &= \text{L.E. } 2\,000 \end{aligned}$$

- (2) Length + Width =  $56 \div 2 = 28\text{ cm.}$

$$\begin{array}{lcl} \text{Length} & : & \text{Width} : \text{Length} + \text{Width} \\ 9 & : & 5 : 14 \\ ? & : & ? : 28 \end{array}$$

$$\text{The length} = \frac{9 \times 28}{14} = 18\text{ cm.}$$

$$\text{The width} = \frac{5 \times 28}{14} = 10\text{ cm.}$$

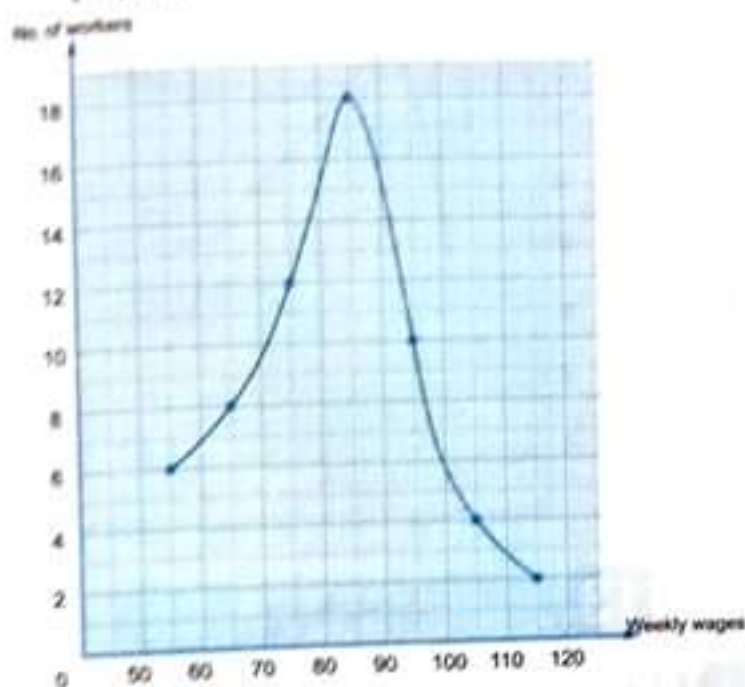
$$\text{The area} = 18 \times 10 = 180\text{ cm}^2$$

- 4 (1) 65 (2) 7 (3) rectangle  
(4) 4 : 1 (5) 28 (6) 16

- 5 (1) [a] The capacity =  $30 \times 30 \times 30$   
 $= 27\,000\text{ cm}^3 = 27\text{ L}$   
[b] The price of oil =  $27 \times 9.5$   
 $= 256.5\text{ pounds.}$



(2) (a)



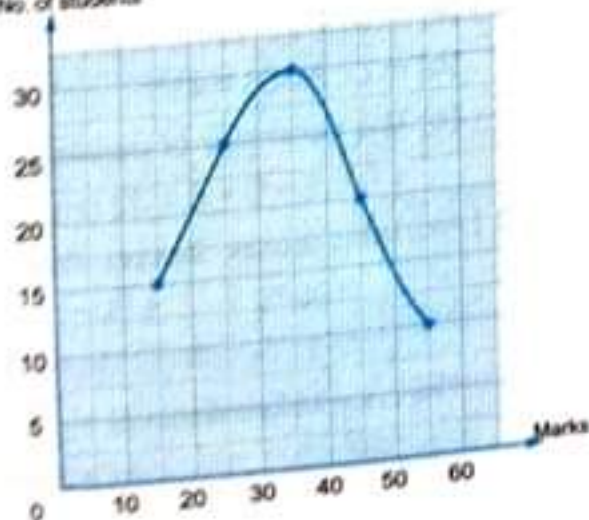
[b] The percentage =  $\frac{6}{60} \times 100\% = 10\%$

**10****Suez**

- 1 (1) reduction (2)  $\frac{1}{8}$  (3)   
 (4) 0.3 (5) 1 : 3   
 (6) the length of the set   
 (7) 8 : 9 (8) volume  $\times$  height   
 (9) 3 papers/min.

- 2 (1) 20 (2) rectangle   
 (3) > (4) square   
 (5) 1 : 100 (6) 62.5 (7)  $180^\circ$    
 (8) 4 000 (9) 30 (10) 54   
 (11) 22 : 7 (12) < (13) age

- 3 (1) The percentage =  $\frac{13}{20} \times 100\% = 65\%$    
 (2) The edge length =  $132 \div 12 = 11$  cm.   
 The volume =  $11 \times 11 \times 11 = 1\,331$  cm<sup>3</sup>.   
 (3)  $m(\angle L) = 118^\circ$ ,  $m(\angle LXZ) = 27^\circ$    
 (4) No. of students

**11****Port Said**

- 1 (1) 6 (2) volume   
 (3) 3 : 8 (4) 5   
 (5) minimization   
 (6) 12 (7) rhombus   
 (8) 1 : 4 (9) 30   
 (10) 12 (11) rectangle   
 (12) age (13) 65%

- 2 (1) 2 : 5   
 (2) base length  $\times$  corresponding height   
 (3) 150 : 1 (4) 80   
 (5) 5 : 8 (6) 271   
 (7) 6 (8)  $80^\circ$  (9) 40

- 3 (1) The volume of the cube =  $12 \times 12 \times 12$    
 $= 1\,728$  cm<sup>3</sup>.

The volume of each ingot =  $3 \times 4 \times 6$    
 $= 72$  cm<sup>3</sup>.

The number of ingots =  $1\,728 \div 72$    
 $= 24$  ingots.

- (2) 1<sup>st</sup> person : 2<sup>nd</sup> person : 3<sup>rd</sup> person : Sum   
 15 000 : 25 000 : 20 000 : (+ 1 000)   
 15 : 25 : 20 : (+ 5)   
 3 : 5 : 4 : 12   
 ? : ? : ? : 5 520

The share of the 1<sup>st</sup> person   
 $= \frac{3 \times 5\,520}{12} = 1\,380$  pounds.

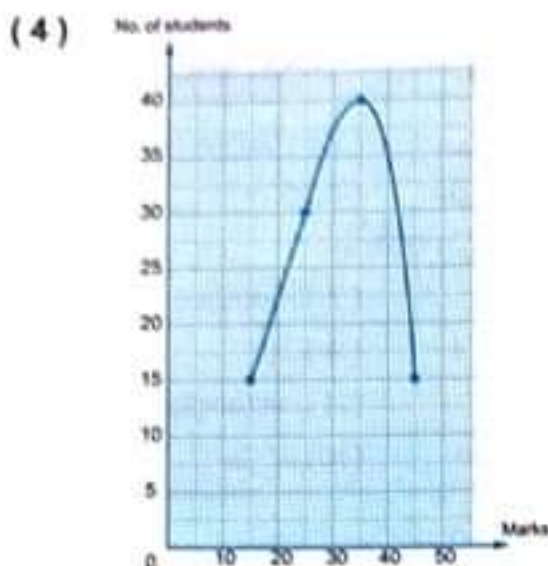
The share of the 2<sup>nd</sup> person   
 $= \frac{5 \times 5\,520}{12} = 2\,300$  pounds.

The share of the 3<sup>rd</sup> person   
 $= \frac{4 \times 5\,520}{12} = 1\,840$  pounds.

- (3) Price before discount : Discount : Price after discount   
 100 % : 15 % : 85 %   
 ? : : 425

The price before discount   
 $= \frac{100 \times 425}{85} = 500$  pounds.





## 12 El-Menia

- 1 (1) < (2) 7 (3) 12  
 (4) rectangle (5) age (6) 30  
 (7) 6 (8) 75 (9) 9 : 20  
 (10) 3 600 (11) 30 (12) 3 : 4

- 2 (13) 1 : 4 (14) 4 000 (15) 27  
 (16) 1 : 9 (17) 7 (18) 4  
 (19) 60 (20) 1 : 100

- 3 (21) Hani : Maged : Difference  
 5 : 6 : 1  
 ? : ? : 10

$$\text{Hani's weight} = \frac{5 \times 10}{1} = 50 \text{ kg.}$$

$$\text{Maged's weight} = \frac{6 \times 10}{1} = 60 \text{ kg.}$$

- (22) Price before discount : Discount : Price after discount

$$100 \% : 10 \% : 90 \%$$

$$? : : 1\ 800$$

$$\text{The price before discount} = \frac{100 \times 1\ 800}{90} = \text{L.E. } 2\ 000$$

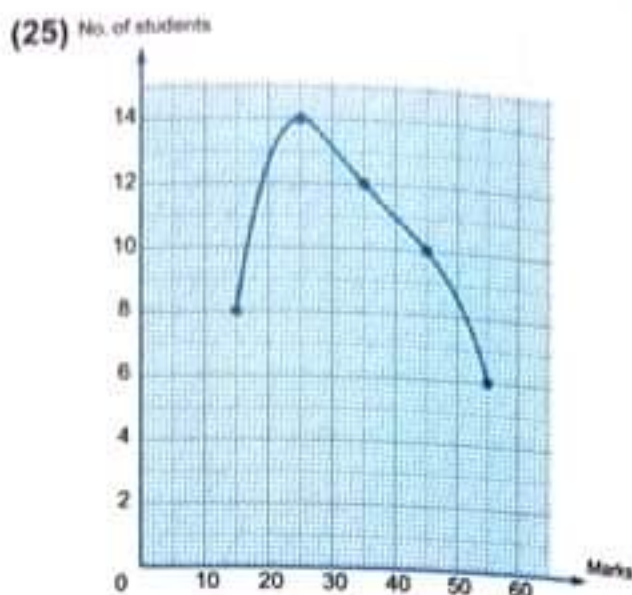
- (23) The volume of the cube =  $12 \times 12 \times 12$   
 $= 1\ 728 \text{ cm}^3$

$$\text{The volume of each ingot} = 3 \times 4 \times 6 = 72 \text{ cm}^3$$

$$\text{The number of ingots} = \frac{1\ 728}{72} = 24 \text{ ingots.}$$

- (24) [a]  $m(\angle C) = 110^\circ$

$$\text{[b] The perimeter} = (8 + 5) \times 2 = 26 \text{ cm.}$$



## 13 Souhag

- 1 (1)  $\frac{1}{4}$  (2)  $25 \text{ cm}^2$  (3) 9  
 (4) 1 000 (5) rhombus (6)  $4\frac{4}{5}$   
 (7) 5 (8) 90 (9)  $1\ 728 \text{ cm}^3$   
 (10)  $\frac{2}{5}$  (11) < (12) 3 : 1  
 (13) age

- 2 (1) 2.5 (2) hollow solid  
 (3) reduction  
 (4) with a right angle (5) 0.9  
 (6) 150 : 1 (7) Cube  
 (8) rhombus, square (9) 4

- 3 (1) The rest =  $17 - 5 = 12$  kirats.

$$\text{Son : Daughter : Sum}$$

$$2 : 1 : 3$$

$$? : ? : 12$$

$$\text{The share of the son} = \frac{2 \times 12}{3} = 8 \text{ kirats.}$$

$$\text{The share of the daughter} = \frac{1 \times 12}{3} = 4 \text{ kirats.}$$

- (2) [a]  $m(\angle D) = 100^\circ$

$$\text{[b] } m(\angle ACD) = 45^\circ$$

$$\text{[c] The perimeter of parallelogram} = 6 + 5 + 6 + 5 = 22 \text{ cm.}$$

- (3) Price before discount : Discount : Price after discount

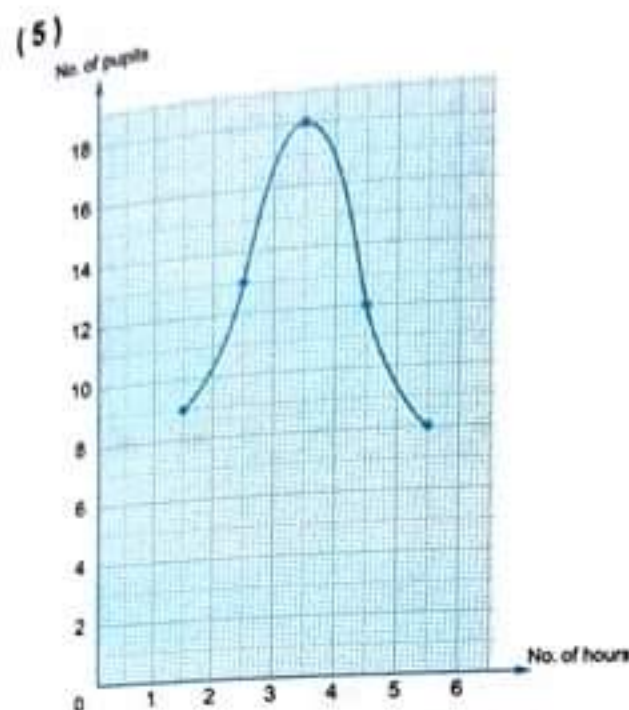
$$100 \% : 5 \% : 95 \%$$

$$? : : 2\ 185$$

$$\text{The price before discount} = \frac{100 \times 2\ 185}{95} = 2\ 300 \text{ pounds.}$$



- (4) The rate for preparing one meal  
 $= \frac{20}{80} = \frac{1}{4}$  kg./meal.  
 The rate for preparing 4 meals  $= \frac{1}{4} \times 4$   
 $= 1$  kg.



## 14 Luxor

- (1) the minimum value  
 (2) base area, height  
 (3) 15 000 (4) rhombus, square  
 (5) 5 : 1 (6) 10 : 3  
 (7) 40 (8) 5 : 11  
 (9) length in drawing, length in reality

- (1) rhombus (2) 10 : 23 (3) 3 cm.  
 (4) 4 : 1 (5) 45 (6) 46  
 (7) 10 L.E./day (8) 64  
 (9) age (10) 6 (11) >  
 (12) 55 000 (13) 6

- (1) Length in drawing : Length in reality  
 1 : 1 500 000  
 3 : ?  
 The real distance  $= \frac{3 \times 1\,500\,000}{1}$   
 $= 4\,500\,000$  cm.  
 $= 45$  km.

- (2) 1<sup>st</sup> person : 2<sup>nd</sup> person : 3<sup>rd</sup> person : Sum  
 1 500 : 2 500 : 2 000 : (+ 100)

$$\begin{array}{ccccccc} 15 & : & 25 & : & 20 & : & (+ 4) \\ \hline 3 & : & 5 & : & 4 & : & 12 \\ ? & : & ? & : & ? & : & 6\,000 \end{array}$$

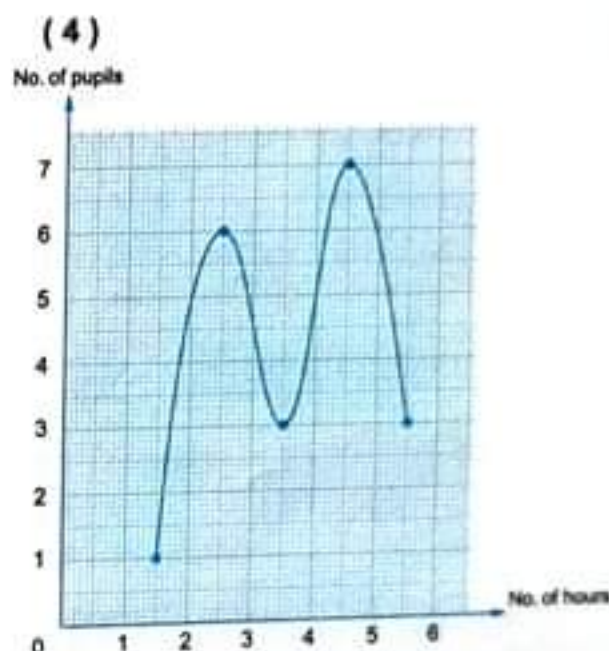
The share of the 1<sup>st</sup> person  $= \frac{3 \times 6\,000}{12}$   
 $=$  L.E. 1 500

The share of the 2<sup>nd</sup> person  $= \frac{5 \times 6\,000}{12}$   
 $=$  L.E. 2 500

The share of the 3<sup>rd</sup> person  $= \frac{4 \times 6\,000}{12}$   
 $=$  L.E. 2 000

- (3) [a]  $m(\angle ADC) = 80^\circ$

[b] The perimeter  $= (8 + 4) \times 2 = 24$  cm.



## 15 Aswan

- (1) (1) 1 : 3 (2) 15 (3) enlargement  
 (4) 3 : 4 (5) 8 (6) 3 000  
 (7)  $\frac{3}{4}$  (8) 15 (9) rectangle  
 (10) 35 (11) 1 : 100 (12) age  
 (13) 30

- (2) (1) L.E. 1 875 (2) 15  
 (3) 210 (4) 5 : 6 (5) 60  
 (6)  $\bigcirc \triangle \square$   
 (7) 4 (8) 80 (9) 30



## Some Governorates Examinations for the Year 2017

## 1 Cairo Governorate (2017)



Answer the following questions : (Calculator is allowed)

## 1 Complete the following :

[a] If  $\frac{x}{8} = \frac{3}{4}$  , then  $x = \dots\dots\dots$

[b]  $\frac{2}{5} = \dots\dots\dots\%$

[c] The quadrilaterals in which its diagonals are equal in length and bisect each other are called  $\dots\dots\dots$  and  $\dots\dots\dots$

[d] The difference between the greatest value and the smallest value in a set of individuals is called  $\dots\dots\dots$



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## 2 Choose the correct answer from those given :

[a] If the volume of a cuboid is  $24 \text{ cm}^3$  and the area of its base is  $6 \text{ cm}^2$  , then its height =  $\dots\dots\dots \text{ cm}$ . ( 3 or 4 or 12 or 18 )

[b] The following data are descriptive except  $\dots\dots\dots$   
( the colour or place of birth or age or blood species )

[c]  $1500 \text{ cm}^3 = \dots\dots\dots \text{ litre}$  ( 0.15 or 1.5 or 15 or 150 )

[d] If an agricultural machine ploughs 14 feddans in 3.5 hours , then the rate of performance of this machine is  $\dots\dots\dots \text{ feddans/hour}$   
(  $\frac{1}{4}$  or  $2\frac{1}{2}$  or 4 or  $10\frac{1}{2}$  )

3 [a] If the distance between two cities on a map of drawing scale 1 : 500 000 equals 3 cm. Find the real distance between the two cities.

[b] The sum of the six faces areas of a cube is  $54 \text{ cm}^2$   
Find : (1) Its edge length. (2) Its volume.

4 [a] The number of pupils of a primary school in the first , the second and the third grades is 240 pupils , if the ratio among the three grades is 5 : 4 : 3 Calculate the number of pupils in each grade of them.

[b] Heba bought an electric sweeping machine for L.E. 425 with discount 15 % Calculate the original price of the sweeping machine before discount.



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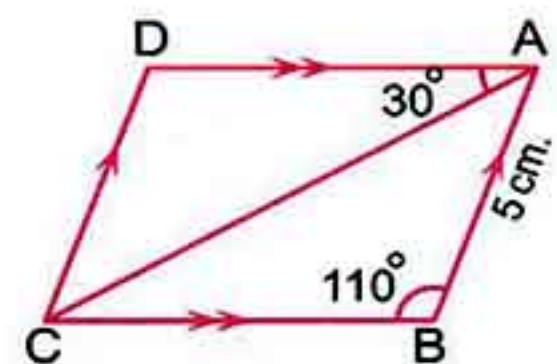


## Final Examinations

5 [a] In the opposite figure :

ABCD is a parallelogram in which  $m(\angle B) = 110^\circ$ ,  $m(\angle DAC) = 30^\circ$  and  $AB = 5$  cm.

Find : (1) The length of  $\overline{CD}$  (2)  $m(\angle BAC)$



[b] The following table shows the marks of 100 pupils in mathematics :

Marks	10 –	20 –	30 –	40 –	50 –	Sum
Number of pupils	15	25	30	20	10	100

(1) Draw the frequency curve for this distribution.

(2) What is the number of pupils who get 30 marks or more ?

## 2 Giza Governorate (2017)



Answer the following questions : (Calculator is allowed)

1 Complete the following :

[a]  $1 - 30\% = \dots\dots\dots$

[b] If  $\frac{2}{5} = \frac{x}{15}$ , then  $x = \dots\dots\dots$

[c] The two diagonals are equal in length in each of  $\dots\dots\dots$  and  $\dots\dots\dots$

[d] If the drawing scale  $< 1$ , this expresses  $\dots\dots\dots$

2 Choose the correct answer :

[a] If  $A : B = 2 : 5$ ,  $B : C = 5 : 9$ , then  $A : C = \dots\dots\dots$

( 5 : 2 or 2 : 9 or 5 : 7 or 2 : 11 )

[b] The volume of the cube in which the sum of all its edge lengths is 36

$= \dots\dots\dots \text{ cm}^3$

( 27 or 63 or 72 or 108 )

[c] The range of the set of the values 7, 3, 6, 9 and 5 is  $\dots\dots\dots$

( 3 or 4 or 6 or 12 )

[d] The opposite data are quantitative except the  $\dots\dots\dots$

( age or tallness or weight or favorite colour )

3 [a] If the length of Suez Canal on a map of scale drawing 1 : 1 100 000 is 15 cm., then find its real length in km.

[b] A water tap is leaking 20 litres of water in 5 hours. Find the leaking rate of water per hour (Please advise them).



4 [a] A swimming pool in the shape of a cuboid whose internal dimensions are 40 m. , 30 m. and 1.8 m. Find its capacity in litres.

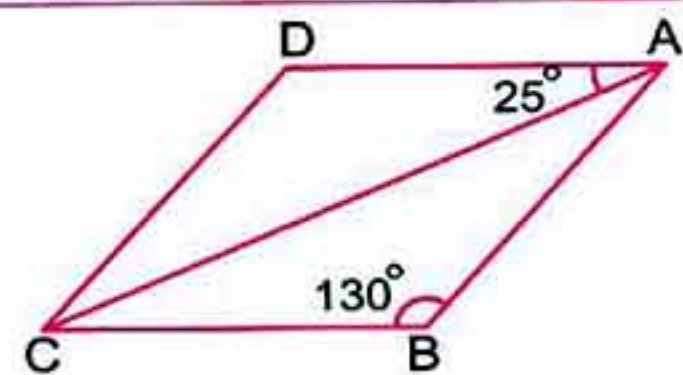
[b] In one of our schools , there are 560 students , if the number of girls =  $\frac{3}{5}$  the number of boys. Find each of the number of boys and girls.

5 [a] In the opposite figure :

ABCD is a parallelogram in which  
 $m(\angle B) = 130^\circ$  and  $m(\angle DAC) = 25^\circ$

Find : (1)  $m(\angle D)$

(2)  $m(\angle BAC)$



[b] The following table shows sums of money in pounds was paid by a group of contributors in a goodness party :

The sum	50 –	60 –	70 –	80 –	90 –	100 –
No. of contributors	5	7	10	12	10	7

(1) Draw the frequency curve of this distribution.

(2) What is the number of contributors by L.E. 80 and more ?

### 3 Alexandria Governorate (2017)



Answer the following questions :

1 Choose the correct answer :

[a] In the following , the smallest number is .....

( 0.5 or 0.25 or 0.125 or 0.375 )

[b] If  $\frac{2}{7} = \frac{x}{21}$  , then  $x =$  .....

( 6 or 21 or 12 or 7 )

[c]  $4\,200\,000\text{ cm}^3 =$  .....  $\text{m}^3$

( 42 or 420 or 4.2 or 4 200 )

[d] The opposite data are quantitative except .....

( tallness or age or number of sons or favorite food )

2 Complete the following :

[a] 56 days = ..... weeks.

[b] The ratio between  $\frac{1}{2}$  kilogram and 700 grams = ..... :

[c] If the values of a frequency distribution lie between (20 , 60) , then the range of this distribution = .....

[d] If one of the angles of the parallelogram is right and two of its adjacent sides are equal in length , then it is called .....





## Final Examinations

- 3 [a] In a class of a primary (mixed school) the number of boys =  $\frac{4}{5}$  the number of girls , if the number of boys is 16 pupils , what is the number of the pupils in the class ?
- [b] Ahmed drew a picture to his brother Osama with a drawing scale 1 : 40 If the real height of Osama is 160 cm. What is his height in the picture ?
- 4 [a] Find the buying price of goods sold for L.E. 21 520 and the percentage of profit is 15 % and find the profit.
- [b] A cube of metal its edge length equals 12 cm. need to be melted down and converted into alloys in the form of a cuboid with dimensions 3 cm. , 4 cm. and 6 cm. Calculate the number of alloys that can be obtained.
- 5 [a] A cube-shaped vessel , its internal edge length is 30 cm. , it is filled with food oil :
- (1) Calculate the capacity of food oil.
- (2) If the price of one litre of food oil is 9.5 pounds. Calculate the price of all oil.

[b] The following table shows the marks of 100 pupils in math exam :

Sets	10 –	20 –	30 –	40 –	50 –	Total
Frequency	15	25	30	20	10	100

Draw the frequency curve for this distribution.

## 4 El-Kalyoubia Governorate (2017)



Answer the following questions :

1 Complete the following :

[a] If  $\frac{a}{b} = \frac{4}{7}$  ,  $\frac{b}{c} = \frac{7}{9}$  , then  $a : b : c = \dots : \dots : \dots$

[b] A water tap is leaking 360 litres of water in an hour , then the leaking rate of water per minute =  $\dots$  litres/minute

[c] The ratio between  $2\frac{1}{4}$  km. and 125 m. =  $\dots : \dots$

[d] The circumference of a circle =  $\dots$

2 Choose the correct answer :

[a] If  $\frac{x+12}{8} = 2$  , then  $x = \dots$  ( 6 or 4 or 8 or 16 )





[b] If the perimeter of a cube base is 36 cm. , then its volume = ..... cm<sup>3</sup>  
( 36 or 6 or 729 or 216 )

[c] 25 % of 1 000 = 50 % of .....  
( 2 000 or 1 500 or 1 250 or 500 )

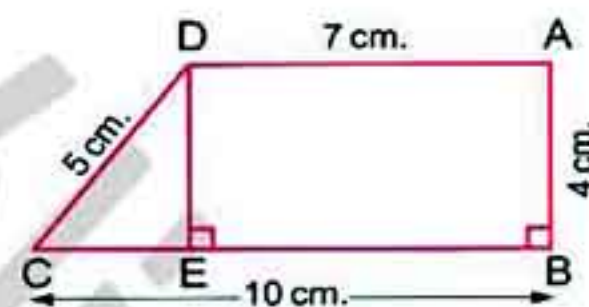
[d] If the real length of a tree is 6 m. and its drawing length is 3 cm. , then the drawing scale = .....  
( 1 : 100 or 1 : 200 or  $\frac{1}{300}$  or 1 : 600 )

3 [a] The ratio between the height of a building and the height of a tower is  $\frac{4}{20}$   
If the height of the building is 36 metres , find the height of the tower.

[b] A model for a football playground is drawn with a drawing scale 1 : 500  
 , if the dimensions of the playground in the model are 2 cm. and 4 cm.  
 Find : (1) The real dimensions of this playground in metres.  
 (2) The real area of this playground.

4 [a] In the opposite figure :

ABCD is a trapezium in which  $m(\angle B) = 90^\circ$   
 , AD = 7 cm. , AB = 4 cm. , BC = 10 cm.  
 , DC = 5 cm. and ABED a rectangle , complete :



(1) AB = ..... = ..... cm.

(2) EC = ..... cm.

(3) The perimeter of the triangle DEC = ..... cm.

[b] A swimming pool is in the shape of a cuboid whose internal dimensions are 40 m. , 30 m. and 1.8 m. Find its capacity in litres.

5 [a] ABC is a right-angled triangle at B , if the ratio between the measures of the angles A and C is 2 : 3 , find the measure of each of the two angles.

[b] The following table shows the temperature degrees expected for 30 cities in one of the summer days :

Temperature degree	24 –	28 –	32 –	36 –	40 –	44 –	Total
Number of cities	3	4	7	9	5	2	30

Draw the frequency curve of the previous table.



## 5 El-Sharkia Governorate (2017)



Answer the following questions :

1 Choose the correct answer :

- [a] The rhombus has ..... lines of symmetry.  
( zero or 1 or 2 or 4 )
- [b] If the ratio 7 : 13 is the same ratio  $x : 52$  , then  $x =$  .....  
( 14 or 21 or 28 or 35 )
- [c] The opposite data are descriptive except .....  
( the favorite colour or birth place or blood species or age )
- [d]  $1.45 \text{ litre} + 0.5 \text{ dm}^3 + 50 \text{ cm}^3 =$  ..... litres  
( 51.95 or 2 or 2.45 or 3 )

2 Complete the following :

- [a] If  $945 = (A \times 100) + 45$  , then  $A =$  .....
- [b] The ratio between 12 kirats and  $1\frac{1}{2}$  feddan (in the simplest form) is ..... : .....
- [c] If 87 is the greatest individual of a set and the range = 39 , then the smallest individual of this set equals .....
- [d] The volume of a cuboid equals  $400 \text{ cm}^3$  and its base is of length = 8 cm. and width = 5 cm. , then its height equals ..... cm.

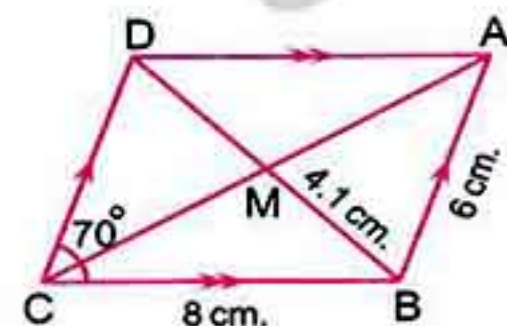
3 [a] A man distributed 6 300 pounds between his three sons , if the share of the first was third of the money and the ratio between the share of the second and the third is 3 : 2 Calculate the share of each of them.

[b] If the distance between two cities is 180 km. and the drawing scale is 1 : 9 000 000 How long is the distance between the two cities on the map ?

4 [a] Nahed bought a computer for L.E. 4 500 and the discount was 10 % Calculate the original price of the computer before discount.

[b] In the opposite figure :

ABCD is a parallelogram in which  $AB = 6 \text{ cm}$ .  
 $BC = 8 \text{ cm}$ . ,  $BM = 4.1 \text{ cm}$ . and  $m(\angle C) = 70^\circ$   
 Without using geometrical instruments ,  
 find :  $m(\angle ADC)$  , the perimeter of  $\triangle BCD$





- 5 [a] The sum of the lengths of all edges of a cube is 132 cm.  
Calculate its volume.

[b] The following table shows the marks of 90 students in maths test :

Marks	10 –	20 –	30 –	40 –	Total
Number of students	15	25	30	20	90

Draw the frequency curve for this data.

## 6 El-Monofia Governorate (2017)



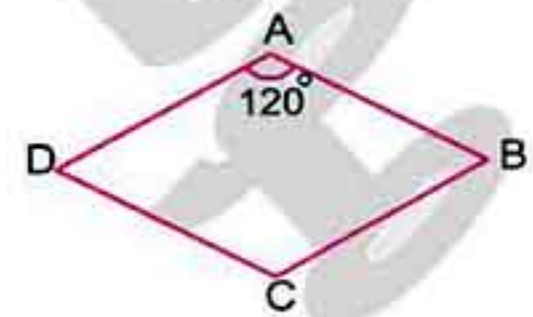
Answer the following questions : (Calculator is allowed)

1 Choose the correct answer from those given :

- [a]  $2.8 \text{ dm}^3 = \dots\dots\dots$  litres ( 2.8 or 28 or 2 800 or 28 000 )  
 [b] If  $\frac{3}{4} = \frac{x}{20}$ , then  $5x = \dots\dots\dots$  ( 15 or 20 or 75 or 5 )  
 [c] The sum of the two numbers X and Y is 20, then  $Y = \dots\dots\dots$   
 (  $20 + X$  or  $20 - X$  or  $X - 20$  or  $\frac{X}{20}$  )  
 [d] From the quantitative data is .....  
 ( the favourite colour or favourite food or the age or social case )

2 Complete the following :

- [a] A machine produces 240 pieces of certain materials in 3 hours  
 , then the rate of production of the machine = ..... pieces/hour  
 [b] If the values of a frequency distribution the between (10 , 50) , then  
 the range of this distribution = .....  
 [c] The triangle whose side lengths are 7 cm. , 7 cm. and 7 cm. is .....  
 [d] In the opposite figure:  
 ABCD is a rhombus  
 in which  $m(\angle A) = 120^\circ$   
 , then  $m(\angle B) = \dots\dots\dots$



- 3 [a] A garden in the shape of a square of side length 50 metres. It is drawn  
 with a drawing scale 1 : 1 000  
 Find its area on the drawing in  $\text{cm}^2$



## Final Examinations

[b] Maher bought a car for L.E. 49 000 and he spent L.E. 1 000 for repairing it , then the sold it for L.E. 55 000 Calculate the percentage of profit.

4 [a] Find the volume of the cube in which the sum of lengths of all its edges is 36 cm.

[b] If the ratio between Ahmed's money and Mohamed's money is 7 : 4 and if Ahmed's money exceeds Mohamed's money by L.E. 60 Find the money with each of them.

5 [a] A cuboid its base is a square-shaped whose perimeter is 20 cm. and its height is 7 cm. Calculate its volume.

[b] On the orphan day , a group of students donated amounts of money in pounds shown in the following table :

Money in pounds	3 –	5 –	7 –	9 –	11 –	Total
Number of students	7	10	15	10	8	50

(1) What is the number of students who donated by 9 pounds and more ?

(2) Draw the frequency curve for this frequency distribution.

## 7 El-Gharbia Governorate (2017)



Answer the following questions :

1 Choose the correct answer from those given :

[a] The ratio between 3 feddans and 40 kirats equals .....  
(  $\frac{3}{4}$  or  $\frac{5}{9}$  or  $\frac{9}{5}$  or  $\frac{4}{3}$  )

[b] If  $\frac{5}{9} = \frac{15}{x}$  , then  $x =$  .....  
( 3 or 5 or 15 or 27 )

[c] If one of the angles of the parallelogram is right and two of its adjacent sides are equal in length , then its is called .....  
( rhombus or square or triangle or rectangle )

[d] The range of the set of values 5 , 4 , 8 , 12 and 7 is .....  
( 8 or 7 or 5 or 4 )

2 Complete :

[a]  $\frac{2}{5} + 30 \% =$  ..... %

[b] The volume of a cuboid equals  $400 \text{ cm}^3$  , its length is 8 cm. and its width is 5 cm. , then its height = ..... cm.



[c] If the length in the drawing is 2 cm. and the real length is 20 metres. , then the drawing scale equals 1 : .....

[d] All the following data [volume , area , length , blood type] are quantitative except .....

3 [a] If the ratio between Ahmed's money and Omar's money is 9 : 13 , if the sum with them is 440 pounds. Find the money with each of Ahmed and Omar.

[b] 10 litres of water were poured in a pot in the shape of a cuboid , its base is in the form of a square , its side length from the inside is 25 cm. Find height of the water in the pot.

4 [a] Abeer bought a TV set for 1 800 pounds and the discount was 10 % Calculate the original price of the TV set before discount.

[b] In the opposite figure :

$m(\angle BAD) = 65^\circ$  ,  $m(\angle DBC) = 45^\circ$

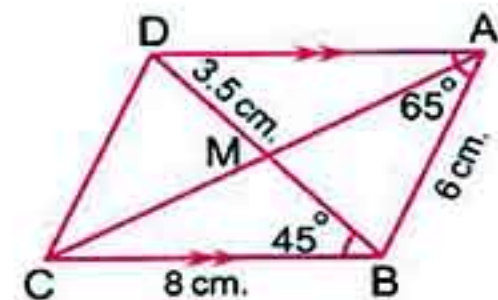
,  $AB = 6$  cm. ,  $CB = 8$  cm. and  $MD = 3.5$  cm.

Calculate without using measuring tools :

(1)  $m(\angle ABD)$

(2)  $m(\angle ADC)$

(3) Perimeter of  $\triangle ABD$



5 [a] If the length of the Suez Canal on a map of drawing scale 1 : 1 100 000 is 15 cm. Find its the real length in kilometres.

[b] The following table shows the marks of 50 students in English exam :

Marks	0 –	5 –	10 –	15 –	20 –	Total
Number of students	4	8	20	12	6	50

(1) Draw the frequency curve.

(2) How many students who record less than 10 marks ?

## 8 El-Dakahlia Governorate (2017)



Answer the following questions :

1 Complete the following :

[a] The capacity is .....

[b] A square , the length of its diagonal is (10 cm.) , then its area = .....  $\text{cm}^2$

[c] If (A is half B) and (B is twice C) , then  $A : C = \dots : \dots$

[d] The range of the set of values 7 , 3 , 6 , 9 and 5 is .....



## Final Examinations

## 2 Choose the correct answer :

- [a] The opposite data are descriptive except .....  
( the favorite colour **or** birthday **or** age **or** blood species )
- [b]  $75\% \text{ litre} + 25\% \text{ dm}^3 = \dots\dots\dots$   
( 10 litre **or** 1 000  $\text{cm}^3$  **or** 100  $\text{dm}^3$  **or** 100  $\text{cm}^3$  )
- [c] A cube , its volume is  $\frac{1}{8} \text{ cm}^3$  , then the perimeter of one face = ..... cm.  
(  $\frac{1}{2}$  **or** 8 **or** 4 **or** 2 )
- [d]  $263.5 \text{ cm.} \approx \dots\dots\dots$  metres (to the nearest metre)  
( 26 350 **or** 264 **or** 3 **or** 260 )

## 3 [a] The ratio between the length of a rectangle to its width equals 7 : 4 , its perimeter is 44 cm. Find the length and the width of the rectangle. Then calculate its area.

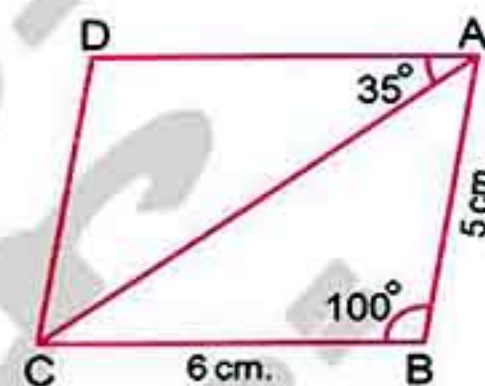
- [b] Aquarium in the shape of cuboid , the inner dimensions of its base are 20 cm. , 15 cm. , if 12 litres of water was poured in it. Find the depth of the water.

## 4 [a] The height of a minaret is 45 metres and the length of its shadow in a moment equals 24 meters. What is the height of a tree if the length of its shadow equals 8 metres in the same moment ?

## [b] In the opposite figure :

ABCD is a parallelogram in which  $AB = 5 \text{ cm.}$   
 $BC = 6 \text{ cm.}$  ,  $m(\angle B) = 100^\circ$  and  $m(\angle DAC) = 35^\circ$   
 Without using measuring tools , find :

- (1)  $m(\angle D)$  (2)  $m(\angle ACD)$   
 (3) The perimeter of parallelogram.



## 5 [a] The owner of a bookshop sold 25 % of notebooks and the remainder was 60 notebooks. How many notebooks were there first ?

- [b] The following table shows the degrees of (60) students in one month in math :

Marks	10 –	20 –	$x$ –	40 –	Total
Number of students	10	15	25	10	60

- (1) Find the value of  $x$   
 (2) Draw the frequency curve for that distribution.



## 9 Ismailia Governorate (2017)



Answer the following questions : (Calculator is allowed)

## 1 Complete the following :

- [a] The rhombus becomes a square if its diagonals are .....
- [b] If the drawing length equals 5 cm. and the real length equals 30 metres , then the drawing scale is ..... : ..... (in the simplest form)
- [c] If the lower limit of the set = 10 and the upper limit = 20 , then its centre = .....
- [d] The circumference of a circle =  $\pi \times$  .....

## 2 Choose the correct answer from those between brackets :

- [a] If  $\frac{x}{21} = \frac{2}{7}$  , then  $x - 3 =$  ..... ( 6 or 4 or 3 or 2 )
- [b] The range of the set of values 4 , 7 , 3 and 9 is ..... ( 12 or 6 or 5 or 3 )
- [c] The volume of a cuboid its height = 3 cm. and surface area of its base =  $12 \text{ cm}^2$  is ..... (  $36 \text{ cm}^3$  or  $4 \text{ cm}^3$  or  $36 \text{ cm}^2$  or  $4 \text{ cm}^2$  )
- [d] The lowest common multiple of 6 and 9 is ..... ( 3 or 6 or 9 or 18 )

## 3 [a] Ahmed spends L.E. 45 in 5 days.

Calculate the rate of spending in one day.

- [b] The owner of one of electrical appliances sold a refrigerator for 3 180 pounds. If the percentage of his profit is 6 % Find the buying price of the refrigerator.

## 4 [a] A cube the perimeter of its base = 40 cm. Find its volume.

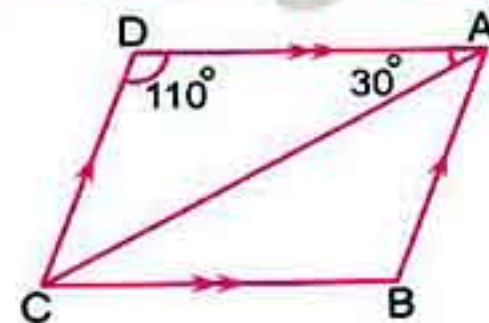
- [b] Three persons shared in a trade. The first paid 50 000 pounds and the second paid 40 000 pounds and the third paid 30 000 pounds , at the end of the year the profit was 36 000 pounds. Find the share of each in profit.

## 5 [a] In the opposite figure :

ABCD is a parallelogram in which  $m(\angle D) = 110^\circ$  and  $m(\angle CAD) = 30^\circ$  Find :

(1)  $m(\angle CAB)$

(2)  $m(\angle B)$





## Final Examinations

[b] The following table shows the marks of 100 pupils in mathematics :

Marks	10 –	20 –	30 –	40 –	50 –	Total
Number of pupils	15	35	25	15	10	100

- (1) Draw the frequency curve for this distribution.  
 (2) Calculate the number of pupils who got less than 30 marks.

## 10 Suez Governorate (2017)



Answer the following questions : (Calculator is allowed)

1 Complete the following :

- [a] 8 hours :  $\frac{1}{2}$  day = ..... : ..... (in the simplest form)  
 [b] If  $\frac{2}{7} = \frac{x}{21}$ , then  $x =$  .....  
 [c]  $4 \text{ m}^3 =$  .....  $\text{dm}^3$   
 [d] The two diagonals are equal in length in each of ..... and .....

2 Choose the correct answer from those given :

- [a]  $0.03 <$  ..... ( 0.02 or 0.1 or 0.009 or 0.011 )  
 [b] Ahmed bought a car at the price L.E. 60 000 and he sold it with profit 5 % , then the selling price of the car is .....  
 ( L.E. 61 000 or L.E. 62 000 or L.E. 63 000 or L.E. 65 000 )  
 [c] The volume of a cuboid whose dimensions are 2 cm. , 3 cm. and 5 cm. = ..... ( 30 cm. or  $30 \text{ cm}^2$  or  $30 \text{ cm}^3$  or  $10 \text{ cm}^3$  )  
 [d] The range of the set of values 7 , 3 , 6 , 9 and 5 is .....  
 ( 9 or 3 or 6 or 7 )

3 [a] An agricultural machine ploughs 6 feddans at 3 hours.  
Find the rate of performance of this machine per hour.

- [b] Three persons set up a commercial business , the first paid  $\frac{3}{4}$  what the second paid , the second paid  $\frac{2}{3}$  what the third paid , at the end of the year the profit became L.E. 6 240  
Calculate the share of each of them from profit.



- 4 [a] The sum of lengths of all edges of a cube is 36 cm. Calculate its volume.  
 [b] The following table shows the marks of 100 students in one month in math :

Marks	10 –	20 –	30 –	40 –	50 –	Total
Number of students	15	25	30	20	10	100

Draw the frequency curve for this distribution.

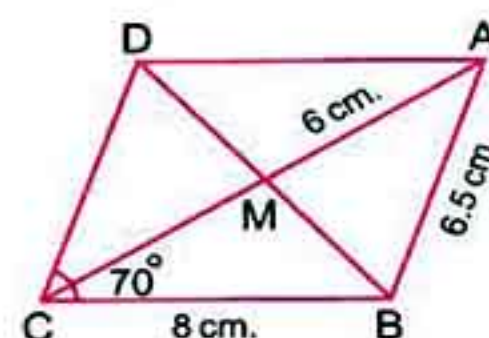
- 5 [a] If the distance between two cities is 180 km. and the drawing scale is 1 : 900 000 How long is the distance between the two cities on the map ?

[b] In the opposite figure :

ABCD is a parallelogram in which AB = 6.5 cm.

, BC = 8 cm. , AM = 6 cm. ,  $m(\angle C) = 70^\circ$

Without using geometrical instruments , find :



- (1)  $m(\angle ABC)$  (2) The length  $\overline{AC}$  (3) The perimeter of  $\triangle ABC$

## 11 Port Said Governorate (2017)



Answer the following questions :

1 Complete the following :

[a]  $8\,765 \times \dots = 876.5$

[b] The length of set =  $\dots \div$  the number of sets

[c] The cube each two adjacent faces intersect at a line segment which is called  $\dots$

[d] The ratio between 18 months and 3 years =  $\dots : \dots$   
 (in the simplest form)

2 Choose the correct answer from those given :

[a]  $7 \dots \{17, 707\}$  ( $<$  or  $\neq$  or  $\in$  or  $\notin$ )

[b]  $6.7 \text{ dm}^3 = \dots$  litres (67 or 6.7 or 670 or 6 700)

[c] The opposite data are quantitative except  $\dots$   
 (age or height or the favorite colour or weight)

[d] If  $\frac{18}{x} = 20\%$  , then  $x = \dots$  (90 or 100 or 120 or 190)





## Final Examinations

- 3 [a] A family spends L.E. 450 in 5 days.

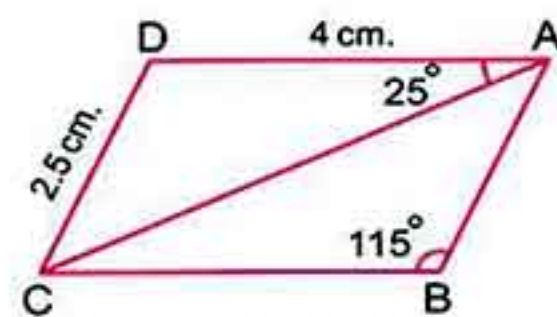
What is the rate of what the family spends per day ?

- [b] A metallic cube of edge length 18 cm. , it needs to be converted into ingots in the shape of cuboids each of them has the dimensions 3 cm. , 6 cm. and 9 cm. Calculate the number of ingots that are obtained.

- 4 [a] Find the buying price of goods sold for L.E. 17 250 and the percentage of profit is 15 %

- [b] In the opposite figure :

ABCD is parallelogram in which  $m(\angle B) = 115^\circ$  ,  $m(\angle DAC) = 25^\circ$  ,  $AD = 4$  cm. and  $CD = 2.5$  cm. Find : The length of  $\overline{BC}$  ,  $m(\angle D)$  ,  $m(\angle ACD)$



- 5 [a] The distance between Port Said and Ismailia on a map of drawing scale 1 : 1 000 000 equals 9 cm. Find the real distance.

- [b] The following table shows the degrees of 100 students in one month in math :

Sets	10 –	20 –	30 –	40 –	50 – 60	Total
Frequency	15	25	30	20	10	100

- (1) Draw the frequency curve for this distribution.

- (2) What is the number of students who record less than 30 degrees ?

## 12 Damietta Governorate (2017)



Answer the following questions : (Calculator is allowed)

- 1 Complete the following :

- [a] The difference between the greatest value and the smallest value in a set of individuals is called .....
- [b] The two diagonals bisect each other and equal in length in ..... and .....
- [c] If  $x$  , 18 , 6 and 9 are proportional , then  $x =$  .....
- [d] The volume of a cube whose sum of lengths of its edges is 36 cm. equals .....  $\text{cm}^3$



2 Choose the correct answer from those given :

- [a]  $6\,500\text{ dm}^3 = \dots\dots\dots \text{ m}^3$  ( 65 000 or 650 or 65 or 6.5 )  
 [b] If the drawing length is 2 cm. and the real length is 20 m. , then the drawing scale is  $\dots\dots\dots$  ( 1 : 10 or 1 : 100 or 1 : 1 000 or 1 : 10 000 )  
 [c] A rectangle of length double its width , then the ratio between width and its perimeter equals  $\dots\dots\dots$  ( 1 : 6 or 1 : 3 or 1 : 2 or 2 : 1 )  
 [d] An agricultural machine ploughs 14 feddans in 3.5 hours , then the rate of performance of the machine in feddan per one hour is  $\dots\dots\dots$  (  $\frac{1}{2}$  or 4 or 8 or 49 )

3 [a] The ratio between the heights of two buildings is 4 : 7 , if the difference between their heights is 9 metres. Find the height of each building.

[b] A tank in the shape of a cuboid whose dimensions are 7 m. , 5 m. and 9 m. Find the volume of water which fill its third.

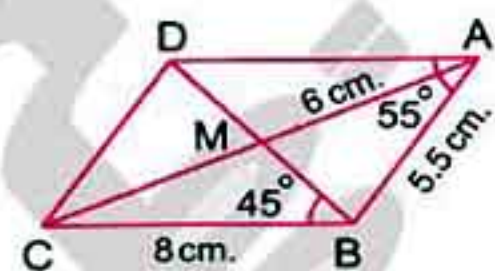
4 [a] Three persons participated in a commercial project , the first paid  $\frac{3}{4}$  of what second paid and the second paid  $\frac{2}{3}$  of what third paid. At the end of the year the profit was L.E. 6 240  
Calculate the share of each of them.

[b] Heba bought an electric sweeping machine for L.E. 221 , if the discount was 15 %  
Calculate the original price of the sweeping machine before discount.

5 [a] In the opposite figure :

ABCD is a parallelogram where  $AB = 5.5\text{ cm.}$   
 $BC = 8\text{ cm.}$  ,  $AM = 6\text{ cm.}$  ,  $m(\angle BAD) = 55^\circ$   
 $m(\angle DBC) = 45^\circ$  Without measuring , find :

- (1)  $m(\angle ABD)$  (2) Perimeter of  $\triangle ACD$



[b] On the orphan day a group of students donated amounts of money in pounds in the following table :

Money in L.E.	3 –	5 –	7 –	9 –	11 –	Total
Number of students	7	10	15	10	8	50

- (1) Represent this data by the frequency curve.  
 (2) What is the number of students who donated by 9 pounds and more ?



## 13 Kafr El-Sheikh Governorate (2017)



Answer the following questions : (Calculator is allowed)

## 1 Complete the following :

- [a] The area of triangle = .....
- [b] A cube , its perimeter of the base is 36 cm. , then its volume = .....  $\text{cm}^3$
- [c] The ratio between 0.75 kirat : 16 sahms = ..... : ..... in the simplest form
- [d] If  $\{3, 6\} = \{9 - x, 3\}$  , then  $x = \dots\dots\dots$

## 2 Choose the correct answer from those given :

- [a] The range of the set of values 7 , 3 , 6 , 9 , 5 equals .....  
( 3 or 4 or 6 or 17 )
- [b] The length of an insect in the picture is 4 cm. and its real length is 2 millimetres , then the drawing scale is .....  
( 1 : 20 or 1 : 80 or 20 : 1 or 80 : 1 )
- [c] 4.6 liter = ..... mL. ( 46 or 460 or 4 600 or 46 000 )
- [d] The opposite data are descriptive except .....  
( the favorite colour or the birth place or the age or the blood species )

## 3 [a] If the ratio between dimensions of rectangle is 3 : 4 and its perimeter equals 140 cm. , find its area.

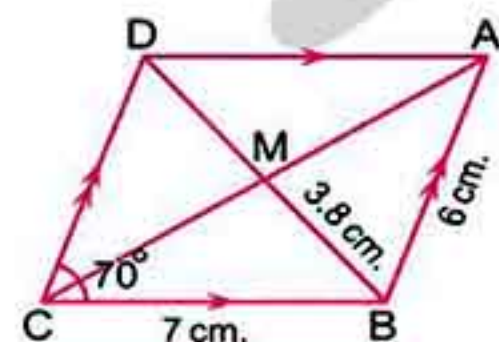
- [b] Find the cost price of goods sold for 21 275 pounds , with profit percentage 15 % and find the value of the profit.

## 4 [a] A piece of building land is distributed between two brothers in the ratio 7 : 5 , if the share of the first one exceeds the share of the second by 80 square metre. Find the area of the land.

## [b] In the opposite figure :

ABCD is a parallelogram in which  $AB = 6 \text{ cm}$  ,  
 $BC = 7 \text{ cm}$  ,  $BM = 3.8 \text{ cm}$  . and  $m(\angle C) = 70^\circ$   
 , without using geometrical instruments find :

- (1)  $m(\angle ADC)$  (2) The perimeter of  $\triangle BCD$





- 5 [a] A swimming pool , its internal dimensions are 30 , 15 and 2 metres , if 405 m<sup>3</sup> of water are poured into it

Find the height of water in the swimming pool in centimetres.

- [b] The following table shows the degrees of 100 students in one month in maths :

Marks	20 –	30 –	40 –	50 –	Sum
Number of students	15	30	40	15	100

- (1) Draw the frequency curve for this distribution.

- (2) **Complete** : The ordered pair which represent the set 50 – is .....

## 14 El-Beheira Governorate (2017)



Answer the following questions :

- 1 Choose the correct answer :

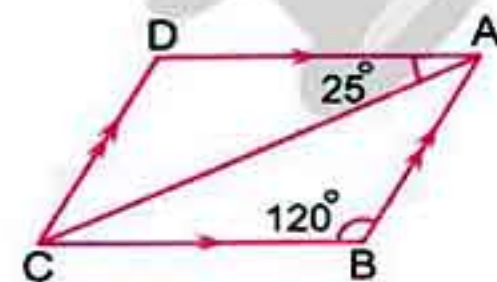
- [a] The centimetre cube is a unit for measuring .....  
( the perimeter **or** the area **or** the volume **or** the length )
- [b] If the ratio among the measurements of the angles of a triangle is 1 : 2 : 3 , then the measure for the smallest angle equals .....  
( 10° **or** 30° **or** 45° **or** 60° )
- [c] The diagonals are perpendicular in each of .....  
( square and rectangle **or** rhombus and rectangle **or** square and rhombus **or** parallelogram and rectangle )
- [d] ..... is quantitative data. ( The favourite colour **or** The birth place **or** The blood species **or** The age )

- 2 Complete the following statements :

[a] 62.5 % =  $\frac{\dots}{8}$

[b] 3 litres = ..... cm<sup>3</sup>

- [c] In the opposite figure :  
ABCD is a parallelogram  
, m (∠ BAC) = ..... °



- [d] If the marks of 5 pupils in one in the tests are 29 , 33 , 57 , 40 , 36 , then the range for these marks is equal to .....



## Final Examinations

- 3 [a]** Two machines for the manufacture of cloth. The first produces 500 metres of cloth in two hours and the second produces 600 metres of cloth in  $2\frac{1}{2}$  hours. Which of the two machines is more efficient ?  
(Determine the steps of solution)
- [b]** Atlas of a number of cities drawn at a scale of 1 : 100 000 , if the real distance between the two cities is 36 km. , find the drawing distance between them in this atlas.
- 4 [a]** A man died and left a piece of land for building , its area is 17 kirats. He recommended for building on orphan house on area equals 5 kirats. The remainder is distributed between his son and his daughter in the ratio 2 : 1 Calculate the share of each of them from the land.
- [b]** A swimming pool in the shape of a cuboid whose internal dimensions are 40 m. , 30 m. and 1.8 m. Find its capacity in litres.
- 5 [a]** A glass vessel is cubed-shaped , its inner edge length is 30 cm. This vessel contains an amount of water. If we throw a metallic piece in it , then the water level raised 5 cm. because of that. Find the volume of the metallic piece.

- [b]** The following frequency distribution table represents the daily wages of a sample formed from 50 workers in a factory :

Wages	10 –	20 –	30 –	40 –	50 –	60 –	70 – 80	Total
Number of workers	4	6	10	14	8	5	3	50

- (1) Draw the frequency curve.
- (2) Find the percentage of the number of workers whose wages are less than L.E. 40

## 15 El-Fayoum Governorate (2017)



Answer the following questions : (Calculator is allowed)

- 1 Complete each of the following :**

- [a]** The ratio between 18 kirats :  $\frac{1}{2}$  feddan = ..... : .....  
(in the simplest form)
- [b]** The sum of measures of the interior angles of a triangle = .....°
- [c]** A vase in the shape of a cube the length of its interior edge equals 20 cm. , then its capacity = ..... litres.





[d] If the values of a frequency distribution lie between (20 , 60) , then the range of this distribution = .....

2 Choose the correct answer from those between brackets :

[a] If  $\frac{5}{9} = \frac{15}{x}$  , then  $x = \dots\dots\dots$  ( 3 or 5 or 15 or 27 )

[b]  $\{3 , 5\} \cap \{4 , 5\} = \dots\dots\dots$  ( {3} or {5} or {4} or {3 , 4 , 5} )

[c] The opposite data are quantitative data except .....

( the length or the age or the birth place or the weight )

[d] If the volume of the cuboid equals  $400 \text{ cm}^3$  and the area of its base equals  $50 \text{ cm}^2$  , then its height = ..... cm.

( 8 or 80 or 40 or 50 )

3 [a] A map is drawn with a scale 1 : 200 000 , if the distance between two cities on this map is 8 cm. Find the real distance between the two cities in kilometers.

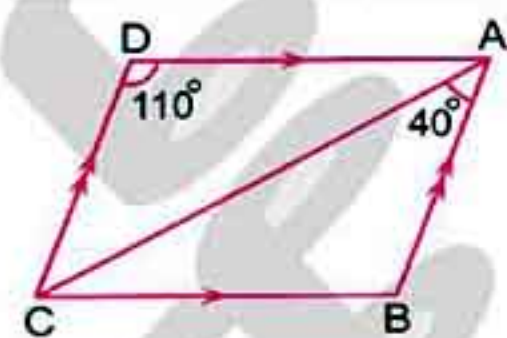
[b] Osama bought a car in the price L.E. 60 000 and he sold it with profit 5 % Find the selling price of the car

4 [a] If the ratio between the share of Hany and the share of Sherif and the share of Khalid is 3 : 5 : 7 and if the share of Hany is L.E. 24 Calculate the share of each of Sherif and Khalid.

[b] A cube of metal its edge length equals 12 cm. need to be melted down and converted into alloys in the form of a cuboid with dimensions 3 cm. , 4 cm. and 6 cm. Calculate the number of alloys that can be obtained.

5 [a] In the opposite figure :

ABCD is a parallelogram in which  
 $m(\angle D) = 110^\circ$  ,  $m(\angle BAC) = 40^\circ$   
 Find :  $m(\angle B)$  ,  $m(\angle DAC)$



[b] The following table shows the marks of 50 pupils in mathematics exam :

The marks	15 –	20 –	25 –	30 –	35 –	Total
No. of pupils	8	12	14	10	6	50

Draw the frequency curve for this distribution.



## 16 Beni Suef Governorate (2017)



Answer the following questions :

1 Complete the following :

[a] The area of a rectangle = .....  $\times$  .....

[b] If  $\frac{3}{4} = \frac{x}{12}$ , then  $x =$  .....

[c]  $5 + 5 + 5 + 5 = 5 \times$  ..... = .....

[d] If the values of a frequency distribution lie between (90 , 30)  
 , then the range of this distribution = .....

2 Choose the correct answer from those given between brackets :

[a] The sum of the measures of any two consecutive angles in  
 a parallelogram = .....° ( 90 or 360 or 180 or 108 )

[b] The side length of a square = 4 cm. , then the ratio between its side  
 length and its perimeter = ..... ( 4 : 1 or 1 : 3 or 3 : 1 or 1 : 4 )

[c] A cuboid its volume is  $400 \text{ cm}^3$  , its length is 8 cm. and its width is 5 cm. ,  
 then its height = ..... cm. ( 8 or 5 or 10 or 4 )

[d] The opposite data are descriptive except .....  
 ( the favourite colour or the birth place or the age or the blood type )

3 [a] A factory produces 1 000 juice cans in 4 hours , calculate its production  
 rate per hour.

[b] A man deposit L.E. 9 000 in a bank and the percentage of interest 10%  
 per year. What is the amount of this sum after one year ?

4 [a] The sum of edges length of a cube is 36 cm. Find volume of this cube.

[b] Atlas of a number of cities drawn at a scale of 1 : 200 000 , if the real  
 distance between the two cities is 48 km. Find the distance between  
 them in this atlas.

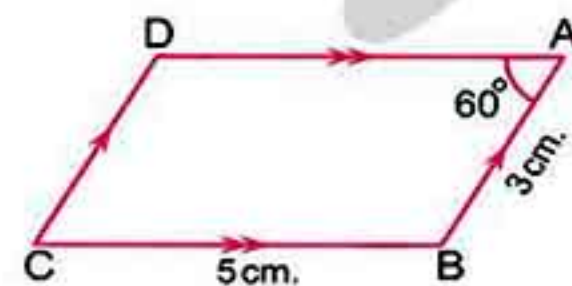
5 [a] In the opposite figure :

ABCD is a parallelogram in which  $AB = 3 \text{ cm}$ .

,  $BC = 5 \text{ cm}$ . and  $m(\angle A) = 60^\circ$  Find :

(1)  $m(\angle C)$

(2) The perimeter of parallelogram ABCD





[b] The following table shows the marks of 100 pupils in maths :

The sets	10 –	20 –	30 –	40 –	Sum
The frequency	25	30	25	20	100

Draw the frequency curve for this data.

## 17 El-Menia Governorate (2017)



Answer the following questions :

1 Choose the correct answer from those given :

[a] 500 gm. :  $1\frac{1}{2}$  kg. = ..... : .....

( 1 : 6 or 1 : 5 or 1 : 4 or 1 : 3 )

[b] If the sum of the edges length of a cube equals 24 cm.

, then its volume = .....  $\text{cm}^3$

( 8 or 12 or 64 or 128 )

[c]  $2.7 \div 0.09 = \dots\dots\dots$

( 3 or 30 or 0.3 or 0.03 )

Which of the following data is countable ?

( the favorite colour or the place of birth or the age or the blood species )

2 Complete the following :

[a] The two diagonals are perpendicular in each of ..... and .....

[b] Three tenths of a number = ..... %

[c] The range of the set of values : 5 , 7 , 3 , 9 , 11 = .....

[d]  $6.284 \times 10 = \dots\dots\dots$

3 [a] If the ratio between the dimensions of rectangle is 3 : 4 and its perimeter equals 70 cm. Find its area.

[b] Ahmed draws a picture to his brother Osama with a drawing scale 1 : 40 , if the real height of Osama is 160 cm. What is his height in the picture ?

4 [a] If the cost price of a set of electric appliances is 60 000 pounds and it is sold at 12% profit. Calculate the selling price.

[b] A cube of cheese its edge length is 15 cm. it needs to be divided it into small cubes the edge length of each is 3 cm. for presenting them through meals. Calculate the number of resulting small cubes.





## Final Examinations

- 5 [a] A juice case in the shape of cuboid , its base is square-shaped of side length 6 cm. and its height is 15 cm. Calculate the volume of juice which fills the case completely.

- [b] On the orphan day a group of students denoted amounts of money in pounds shown in the following table :

Money in pounds	3 –	5 –	7 –	9 –	11 –	Sum
Number of students	7	10	15	10	8	50

- (1) What is the number of students who denoted by 7 pounds and more ?  
(2) Draw the frequency curve for this distribution.

## 18 Assiut Governorate (2017)



Answer the following questions : (Calculator is allowed)

- 1 Choose the correct answer from those given :

- [a] If  $\frac{7}{13} = \frac{x}{52}$  , then  $x =$  ..... ( 14 or 21 or 28 or 25 )  
 [b] 39 days  $\approx$  ..... weeks. ( 5 or 6 or 7 or 8 )  
 [c] The opposite data are descriptive except .....  
 ( the favorite colour or the birthday or the age or the blood species )  
 [d] 18 kirats : 2 feddans = ..... (in the simplest form).  
 ( 3 : 4 or 4 : 3 or 9 : 2 or 3 : 8 )

- 2 Complete the following :

- [a]  $2\frac{3}{4} \div 1\frac{3}{8} =$  .....  
 [b] If one of the angles of the parallelogram is right and two of its adjacent sides are equal in length , then it is called .....  
 [c] An agricultural machine ploughs 14 feddans in 3.5 hours. , then the rate of performance of the machine in feddan per hour is .....  
 [d] The range of the set of values 7 , 3 , 6 , 9 is .....

- 3 [a] Two wire pieces , the ratio between their length is 5 : 9 , if the sum of their lengths is 126 metres. Calculate the length of each piece.  
 [b] A picture was take to an artificial scene with a drawing scale 1 : 100  
 If the real length of a tree is 18 metres , find its length in the picture.



- 4 [a] A swimming pool , its internal dimensions are 30 , 15 and 2 metres.  
405 m<sup>3</sup> of water are poured into it. Find :

- (1) The height of water in the swimming pool.  
(2) The volume of water which is needed to fill the swimming pool completely.

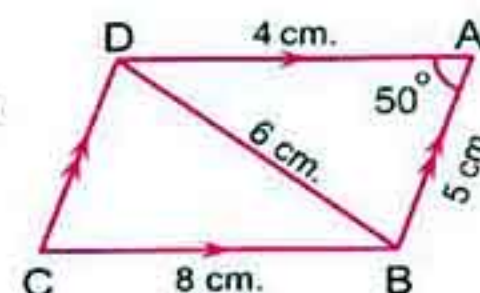
[b] In the opposite figure :

ABCD is a parallelogram in which

AB = 5 cm. , BC = 8 cm. , BD = 6 cm. ,  $m(\angle A) = 50^\circ$

Without using geometrical instruments , find :

- (1)  $m(\angle ADC)$  (2) The perimeter of  $\triangle BCD$



- 5 [a] A piece of building land is distributed between brothers in the ratio 7 : 5  
If the share of the first one exceeds the share of the second by  
80 square meter. Find the area of the land and the share of each of the  
first and the second.

[b] The following table shows the age of visitors to an exhibition  
within an hour of the day :

Visitor's age	10 –	20 –	30 –	40 –	50 –	The sum
Number of visitors	6	9	12	10	8	45

Draw the frequency curve for this distribution.

## 19 Souhag Governorate (2017)



Answer the following questions :

1 Complete the following :

- [a] The two diagonals are equal in length in each of ..... and .....  
[b] The ratio between 250 gm. :  $\frac{3}{4}$  kg. = ..... : .....  
[c] If the numbers 4 ,  $x$  , 12 and 18 are proportional then  $x$  = .....  
[d] If the values of a frequency distribution lie between 20 , 60 , then  
the range of this distribution = .....

2 Choose the correct answer :

- [a] The circumference of circle = ..... (  $2\pi r$  or  $\pi r^2$  or  $\pi r$  or  $3r$  )  
[b] The opposite data are descriptive except .....  
( the favourite colour or the birth place or the blood species or the age )



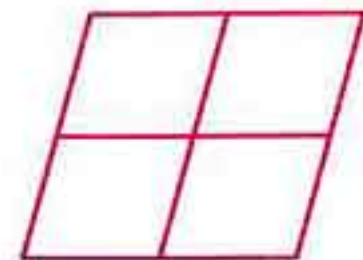


## Final Examinations

- [c] The side length of a square is 3 cm. , then the ratio between its length and its perimeter equals ..... ( 4 or 3 or  $\frac{1}{4}$  or  $\frac{1}{3}$  )

- [d] In the opposite figure :

The number of parallelograms which can be obtained is .....



( 4 or 5 or 7 or 9 )

- 3 [a] If the drawing scale which is registered on a map is 1 : 500 000 and the distance between two cities on this map is 3 cm. Find the real distance between them in kilometres.

- [b] Hany , Samy and Khaled started a trade business. Hany paid 30 000 pounds. Samy paid 40 000 pounds and Khaled paid 50 000 pounds. At the end of the year the profit of the company was 6 000 pounds. Find the share of each of them from the profit.

- 4 [a] A cube of metal its edge length equals 9 cm. need to be melted down and converted into alloys in the form of cuboid with dimensions 3 cm. , 3 cm. and 1 cm. Calculate the number of alloys that can be obtained.

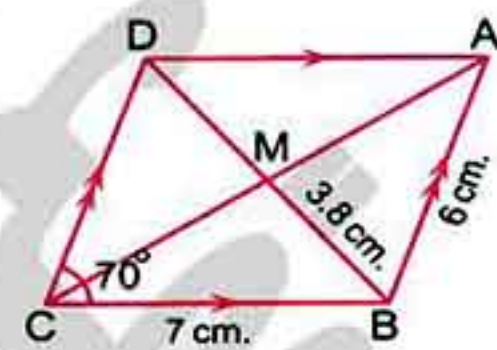
- [b] Find the buying price of goods sold for 23 000 pounds with profit percentage 15% and find the profit.

- 5 [a] In the opposite figure :

ABCD is a parallelogram in which AB = 6 cm. , BC = 7 cm. , MB = 3.8 cm. and  $m(\angle C) = 70^\circ$

Without using measuring tools , calculate :

- (1)  $m(\angle ADC)$  (2) The perimeter of  $\triangle BCD$



- [b] The following table shows the ages of visitors to an exhibition within an hour of the day :

Visitor's age	10 –	20 –	30 –	40 –	50 –	Total
Number of visitors	6	9	12	10	8	45

- (1) What is the number of visitors whose ages are less than 40 years ?  
(2) Draw the frequency curve for this distribution.





## 20 Qena Governorate (2017)



Answer the following questions : (Calculator is allowed)

1 Choose the correct answer :

- [a] The following data are quantitative except .....  
( the age **or** the blood species **or** the number of children **or** the weight )
- [b] If an angle in a parallelogram is right and two adjacent sides are equal in length , then it is called .....  
( rhombus **or** triangle **or** square **or** rectangle )
- [c] If the values of a frequency distribution lie between 20 and 60 , then the range of this distribution is ..... ( 40 **or** 80 **or** 60 **or** 100 )
- [d] 4.6 litres = ..... mL. ( 46 **or** 460 **or** 46 000 **or** 4 600 )

2 Complete the following :

- [a] If  $\frac{2}{7} = \frac{x}{21}$  , then  $x =$  .....
- [b] The ratio between the side length of a square and its perimeter = ..... : .....
- [c]  $\frac{9}{20} =$  .....%
- [d] If the base of a cuboid is on the shape of a square of side length 10 cm. and its height of 7 cm. , then its volume = .....

3 [a] A tractor ploughs 6 feddans in three hours , if another tractor ploughed 10 feddans in 4 hours , which of them is more efficiency.

[b] A cube-shaped vessel is full of oil , its inner edge is 30 cm.

(1) Calculate its capacity in litres.

(2) Calculate the price of oil if the price of one litre = 10 pounds.

4 [a] A picture was taken to a building with a drawing scale 1 : 1 000 , if the height of that building in the picture is 3 cm. , then find its real length.

[b] A metallic cube its edge length is 12 cm. is melted and converted into ingots in the shape of cuboids each of them has the dimensions 3 cm. , 4 cm. and 6 cm. Find the number of ingots that are obtained.





## Final Examinations

- 5 [a]** A piece of building land is distributed between two brothers in the ratio 7 : 5 , if the share of the first one exceeds the share of the second by 80 square metres , find the area of the land and the share of each of them.

**[b]** The following table shows the marks of 100 pupils in a month :

Marks	20 –	30 –	40 –	50 –	Total
Number of pupils	15	30	40	15	100

- (1) How many pupils get less than 40 degrees ?  
(2) Draw the frequency distribution.

## 21 Luxor Governorate (2017)



Answer the following questions :

**1 Choose the correct answer :**

- [a]** If the numbers 4 ,  $x$  , 12 , 18 are proportional quantities , then  $x = \dots\dots\dots$  ( 3 or 6 or 9 or 12 )  
**[b]** The measure of the straight angle =  $\dots\dots\dots^\circ$  ( 90 or 180 or 360 or 120 )  
**[c]** The range of the values 1 , 3 , 4.4 , 5 is  $\dots\dots\dots$  ( 1 or 3 or 4 or 5 )  
**[d]** A cube of volume  $125 \text{ cm}^3$  , its base area =  $\dots\dots\dots$  (  $25 \text{ cm}^2$  or 25 cm or  $5 \text{ cm}^2$  or 5 cm )

**2 Complete the following :**

- [a]** 16 kirats : 1 feddan =  $\dots\dots\dots$   
**[b]** The following data (age , length , weight , blood type) are quantitative except  $\dots\dots\dots$   
**[c]** 3 litres =  $\dots\dots\dots \text{ cm}^3$   
**[d]** The four sides are equal in length in  $\dots\dots\dots$  and  $\dots\dots\dots$

- 3 [a]** Ahmed bought a flat for L.E. 150 000 and sold it with loss 5 % Find the selling price of the flat.  
**[b]** If the drawing scale of a picture of one building is 1 : 1 000 and if the height of the building in the picture is 3 cm. , find the real height in metres.

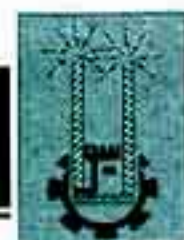


- 4 [a] If the ratio between the length of two roads is 2 : 5 and the difference between their lengths is 21 km. , find the length of each road.
- [b] A container in the shape of a cube its inner edge length is 20 cm. , full of honey. If the price of each litre of honey is 8 pounds , find the price of the honey in container.
- 5 [a] A cartoon box in the shape of a cuboid , its inner dimensions are 50 cm. , 40 cm. and 30 cm. it is wanted to fill it with tea boxes each in the shape of a cuboid of dimensions 10 cm. , 5 cm. and 6 cm. , calculate the number of tea boxes which fill completely the cartoon box.
- [b] The following table represents the marks of 100 students in math's test :

Marks	20 –	30 –	40 –	50 –	Total
Number of students	15	30	40	15	100

- (1) Represent these data by the frequency curve.
- (2) What is the number of students who got less than 40 marks ?

## 22 Aswan Governorate (2017)



Answer the following questions : (Calculator is allowed)

1 Choose the correct answer :

- [a]  $\frac{1}{2} = \dots\dots\dots$  ( 0.5 or 0.2 or 0.1 or 0.05 )
- [b] 300 gm. :  $1\frac{1}{2}$  kg. =  $\dots\dots\dots$  ( 1 : 3 or 1 : 5 or 1 : 10 or 1 : 30 )
- [c] If one the angles of parallelogram is right and two adjacent sides are equals in length is called  $\dots\dots\dots$   
( rhombus or rectangle or triangle or square )
- [d] The opposite data are quantitative except the  $\dots\dots\dots$   
( age or tallness or favourite colour or weight )

2 Complete the following :

- [a]  $5\text{ cm}^3 = \dots\dots\dots\text{ mL}$ .
- [b]  $48.684 \approx \dots\dots\dots$  (to nearest hundredth)
- [c] If the values of a frequency distribution lie between (20 , 60) , then the range =  $\dots\dots\dots$
- [d] If  $\frac{x}{3} = 9\%$  , then  $x = \dots\dots\dots$



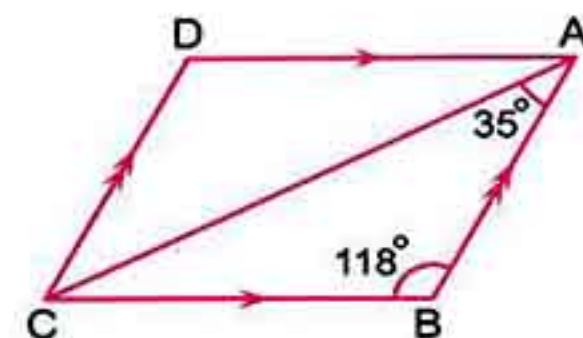


## Final Examinations

- 3 [a] The price of buying refrigerator is L.E. 2 400 and price of selling is L.E 2 640 Calculate the percentage of profit.
- [b] If the distance between two cities on map is 10 cm. and the real distance between them is 120 km. Find the drawing scale of this map.
- 4 [a] A case in the shape of a cuboid , its base is a square-shaped of side length 6 cm. and its height is 10 cm. Calculate its volume.

[b] In the opposite figure :

ABCD is parallelogram where  
 $m(\angle B) = 118^\circ$  ,  $m(\angle BAC) = 35^\circ$   
 Find :  $m(\angle D)$  ,  $m(\angle DAC)$



- 5 [a] If the ratio between the measures angles of triangle is 5 : 6 : 7 and the measure of the smallest angle is  $50^\circ$   
 Find the measure of each of the other two angles.
- [b] The following table shows the marks of 100 pupils in math exam :

Marks	10 –	20 –	30 –	40 –	50 –	Total
Number of pupils	15	25	30	20	10	100

- (1) Calculate the number of pupils who got 30 marks or more.
- (2) Draw the frequency curve for this distribution.

## 23 South Sinai Governorate (2017)



Answer the following questions : (Calculator is allowed)

I Complete the following :

- [a] 18 kirats : 2 feddans = ..... : ..... (in the simplest form)
- [b] In the quadrilaterals , the two diagonals are equal in length in each of ..... and .....
- [c] The difference between the greatest and the smallest value in set of individuals is called .....
- [d] The smallest prime number is .....



2 Choose the correct answer from those given answers :

[a] If  $\frac{2}{7} = \frac{x}{21}$ , then  $x = \dots\dots\dots$  ( 6 or 7 or 12 or 21 )

[b] The opposite data are descriptive except  $\dots\dots\dots$   
( the favorite colour or the birth place or the age or the blood species )

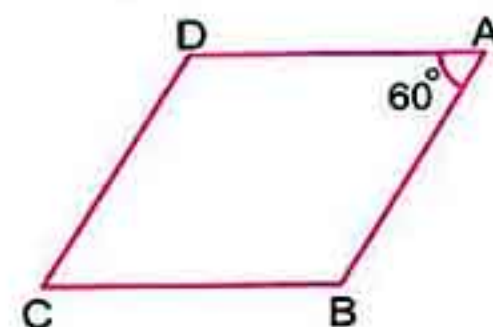
[c] Number of edges of a cuboid =  $\dots\dots\dots$  edges. ( 4 or 6 or 8 or 12 )

[d] In the opposite figure :

ABCD is a parallelogram

,  $m(\angle A) = 60^\circ$

, then  $m(\angle B) = \dots\dots\dots$



(  $30^\circ$  or  $60^\circ$  or  $90^\circ$  or  $120^\circ$  )

3 [a] A cubic vessel of internal edge length 30 cm.

Calculate the capacity of the vessel in litres.

[b] If the distance between two cities is 180 km. and the drawing scale is 1 : 9 000 000

How long is the distance between the two cities on the map ?

4 [a] A shop keeper for electric sets sold a refrigerator for L.E. 3 180

If the percentage of his profit is 6 % Find the buying price.

[b] A primary school has 540 pupils if the ratio between the number of boys to the number of girls is 4 : 5 Calculate the number of each boys and girls.

5 [a] Find the volume of a cuboid in which the area of its base is  $16 \text{ cm}^2$  and of height 9 cm.

[b] The following table shows the degree of 100 students in one month in math :

Marks	10 –	20 –	30 –	40 –	Total
Number of students	15	25	45	15	100

Draw the frequency curve for this distribution.





## 24 Red Sea Governorate (2017)



Answer the following questions :

1 Choose the correct answer :

[a]  $42\,000\text{ cm}^2 = \dots\dots\dots \text{m}^2$  ( 42 or 420 or 4.2 or 4 200 )

[b] If the numbers 4 ,  $x$  , 12 , 18 were in proportion  
 , then the value of  $x = \dots\dots\dots$  ( 6 or 9 or 15 or 18 )

[c] If the sum of the edge lengths of a cube equals 60 cm.  
 , then its volume equals  $\dots\dots\dots \text{cm}^3$   
( 1 000 or 343 or 216 or 125 )

[d] The following data are descriptive except  $\dots\dots\dots$   
( the place of birth or the blood species or the age or the favorite colour )

2 Complete the following :

[a] The two diagonals are perpendicular in each of  $\dots\dots\dots$  ,  $\dots\dots\dots$

[b] If the values of a frequency distribution lie between (30 , 50) , then the  
 range of this distribution =  $\dots\dots\dots$

[c] A factory produce 8 000 bottles of soft drink in 16 hour , then the rate of  
 production per hour =  $\dots\dots\dots$  bottle/hour

[d] 45 days  $\approx \dots\dots\dots$  to the nearest week.

3 [a] Two lorries , the load of the first is 600 kg. and the load of other is 1.5 ton  
 , find the ratio between the load of the first to the load of the second in  
 the simplest form. (ton = 1 000 kg.)

[b] If the length of the Suez Canal on a map of drawing scale 1 : 1 100 000  
 is 15 cm. Find its real length in kilometres.

4 [a] A company for selling the electric sets it shows TV set for L.E 2 200  
 If the percentage of the profit is 10 % Find the buying price of TV set

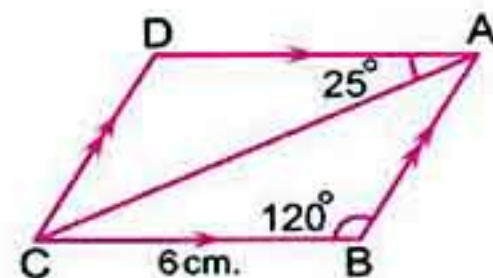
[b] A cuboid of volume is  $4\,800\text{ cm}^3$  and the area of its base is  $240\text{ cm}^2$   
 Find its height.



- 5 [a] The opposite figure shows a parallelogram in which  $m(\angle B) = 120^\circ$ ,  $m(\angle DAC) = 25^\circ$  and  $BC = 6$  cm.

Calculate without using measuring tools each of :

- (1)  $m(\angle D)$
- (2)  $m(\angle BAC)$
- (3) The length of  $\overline{AD}$



تفوقك في أي مذكرة عليها العلامة دي  
www.facebook.com/groups/zakroolypr6

- [b] The following table shows the age of visitors to an exhibition within an hour of the day :

Visitor's age	10 –	20 –	30 –	40 –	50 –	Sum
Number of visitors	6	9	12	10	8	45

Draw the frequency curve for this distribution.

## 25 Matrouh Governorate (2017)



Answer the following questions : (Calculator is allowed)

- 1 Complete the following :

- [a] The volume of the cube = .....
- [b]  $1 \frac{3}{4} = \dots\dots\dots \%$
- [c]  $\frac{1}{4} + \frac{3}{4} = \dots\dots\dots$
- [d] The difference between the greatest value and the smallest value in a set of individuals is called .....

- 2 Choose the correct answer :

- [a] If  $\frac{2}{7} = \frac{x}{21}$ , then  $x = \dots\dots\dots$  ( 6 or 21 or 12 or 7 )
- [b]  $3 \dots\dots\dots \{1, 2, 3, 4\}$  ( $\subset$  or  $\not\subset$  or  $\in$  or  $\notin$ )
- [c] In the parallelogram, the sum of the measures of any two consecutive angles = ..... (  $160^\circ$  or  $280^\circ$  or  $180^\circ$  or  $120^\circ$  )
- [d] The opposite data are descriptive except .....  
( the favorite colour or the birthday or the age or the blood species )



هذا العمل حصري على موقع ذاكرولى التعليمي ولا يسمح بنشره في أي مواقع أخرى  
لمزيد من أعمالنا تفضل بزيارة موقعنا على الانترنت <https://www.zakrooly.com>



## Final Examinations

- 3 [a] The ratio between the lengths of two roads is 2 : 5 and the difference between their lengths is 21 km. Find the length of each road.
- [b] Find the buying price of goods sold for L.E. 41 400 and the percentage of profit is 15% and find the profit.
- 4 [a] A container has 12 litres of honey , it is wanted to put them in smaller vessels (bottles) the capacity of each of them is 400 cm<sup>3</sup>. Calculate the number of bottles which is needed for that.

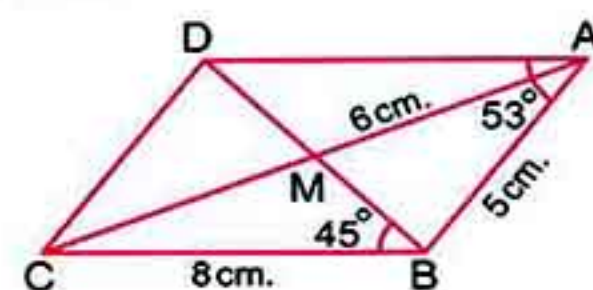
[b] In the opposite figure :

$$m(\angle A) = 53^\circ, m(\angle DBC) = 45^\circ$$

$$AM = 6 \text{ cm.}, AB = 5 \text{ cm.}, BC = 8 \text{ cm.}$$

Calculate without using measuring tools each of :

- (1)  $m(\angle ABD)$
- (2)  $m(\angle D)$
- (3) The length of  $\overline{AC}$



- 5 [a] A macket of a playground of a school is drawn is drawn with drawing scale 1 : 500 the dimensions of the playground in the picture were 2 cm. and 4 cm. Find the real dimensions of the playground in metre.
- [b] The following table shows the number of hours which the pupils of a class spend daily in front of the computer :

Number of hours	1 –	2 –	3 –	4 –	5 –	6 –	Total
Number of pupils	7	11	15	6	4	2	45

Represent these data by frequency curve.



## Some Governorates Examinations for the Year 2016

## 1 Cairo Governorate (2016)



Answer the following questions : (Calculator is allowed)

## 1 Complete the following :

[a]  $0.4 : 0.8 = \dots\dots\dots$  :  $\dots\dots\dots$  (in the simplest form)

[b] The range of set of the these values : 20 , 95 , 70 and 45 equals  $\dots\dots\dots$

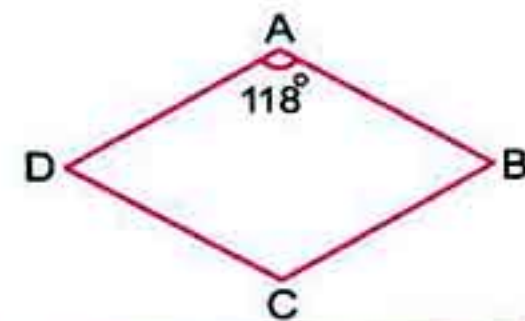
[c] If the quantities :  $x$  , 6 , 20 and 30 are in proportion , then  $x = \dots\dots\dots$

[d] In the opposite figure :

ABCD is a rhombus in which

$m(\angle A) = 118^\circ$

, then  $m(\angle B) = \dots\dots\dots^\circ$



## 2 Choose the correct answer from those given :

[a] The cuboid has  $\dots\dots\dots$  edges. ( 12 or 8 or 6 or 4 )

[b] The given data are quantitative except the  $\dots\dots\dots$   
( weight or length or nationality or age )

[c]  $1.2 \text{ litres} + 800 \text{ cm}^3 = \dots\dots\dots$  litres. ( 2 or 9.2 or 200 or 2 000 )

[d] If 100 grams of chocolate give 300 calories. What is the number of calories which are found in 30 grams of the same chocolate ?  
( 90 or 100 or 900 or 9 000 )

3 [a] If the length of Suez Canal in a map of drawing scale 1 : 1 100 000 is 15 cm. , then find its real length in kilometres.

[b] Three persons involved in a business , the first paid L.E. 60 000 , the second paid L.E. 80 000 and the third paid L.E. 90 000  
At the end of the year the profit was L.E. 20 700  
Find the share of each person in profit.

4 [a] A man bought a flat for L.E. 100 000 , after three years he sold it for L.E. 130 000 Find the percentage of his profit.



## Final Examinations

[b] In the opposite figure :

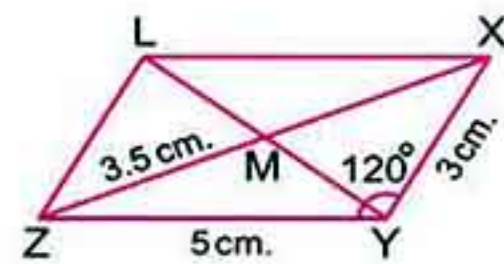
XYZL is a parallelogram in which

$m(\angle XYZ) = 120^\circ$  ,  $XY = 3$  cm.

,  $YZ = 5$  cm. and  $ZM = 3.5$  cm.

Find : (1)  $m(\angle XLZ)$

(2) The perimeter of the triangle XLZ



- 5 [a] A container contains 12 litres of honey. It is wanted to pour it in small bottles , the capacity of each of them is  $400 \text{ cm}^3$ . Calculate the number of bottles which are needed for that.

[b] The following table shows the marks of 100 pupils in mathematics in a month :

The marks	20 –	30 –	40 –	50 – 60	Total
Number of pupils	10	30	40	20	100

Draw the frequency polygon for this distribution.

## 2 Giza Governorate (2016)



Answer the following questions : (Calculator is allowed)

1 Complete the following :

[a] If  $\frac{x}{27} = \frac{2}{3}$  , then  $x = \dots\dots\dots$

[b] The volume of a cube of edge length 3 cm. =  $\dots\dots\dots \text{ cm}^3$

[c] The ratio between the side length of a square and its perimeter =  $\dots\dots\dots$  ;  $\dots\dots\dots$

[d] The range of the set of the values : 7 , 3 , 6 , 9 and 5 is  $\dots\dots\dots$

2 Choose the correct answer :

[a]  $\frac{3}{4}$  litre =  $\dots\dots\dots \text{ cm}^3$  ( 250 or 500 or 750 or 900 )

[b] 20 % from 40 kg. =  $\dots\dots\dots$  kg. ( 4 or 8 or 12 or 16 )

[c] The opposite data are descriptive except the  $\dots\dots\dots$   
( favorite colour or birth place or age or blood species )

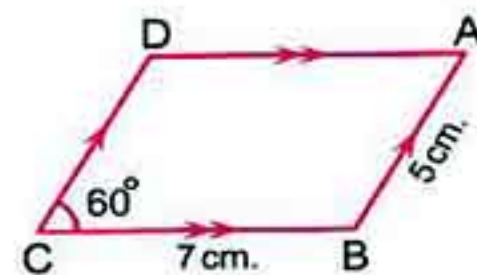
[d] If one angle in a parallelogram is right , then it is called  $\dots\dots\dots$   
( rhombus or trapezium or triangle or rectangle )



- 3 [a] Find the volume of a cuboid with dimensions 12 cm. , 10 cm. , 8 cm.  
 [b] Find the buying price of goods sold for L.E. 21 520 and the percentage of profit is 15 % , and find the profit.
- 4 [a] Omar took a magnified picture with a camera. If the length of an insect in the picture is 10 cm. and its real length is 2 mm. Find the drawing scale.  
 [b] A load of apple fruit weights 280 kg. is distributed among three merchants. The share of the first =  $\frac{2}{3}$  the share of the second and the share of the second =  $\frac{4}{5}$  the share of the third. Calculate the share of each of them from this load.

- 5 [a] In the opposite figure :

ABCD is a parallelogram in which  
 , AB = 5 cm. , BC = 7 cm.  
 ,  $m(\angle C) = 60^\circ$  Find :



- (1)  $m(\angle A)$  (2)  $m(\angle D)$   
 (3) The perimeter of the parallelogram ABCD

- [b] The following table shows the degrees of 100 students in maths test :

Marks	20 –	30 –	40 –	50 –	Sum
Number of students	15	20	50	15	100

Represent these data by the frequency curve.

### 3 Alexandria Governorate (2016)



Answer the following questions :

- 1 Complete the following :

- [a]  $12 \times (350 + \dots) = \dots \times 350 + 12 \times 220$   
 [b] If the length of an insect in the picture is 10 cm. and its real length is 2 mm. , then the drawing scale = ..... : 1  
 [c] 4.63 litre = .....  $\text{cm}^3$   
 [d]  $\frac{\text{The range}}{\text{The length of the set}} = \dots$



## Final Examinations

2 Choose the correct answer from those given :

[a] If  $\{3, 5\} \subset \{3, 7, x\}$ , then  $x = \dots\dots\dots$  ( 5 or 9 or 6 or 15 )

[b] The following data are quantitative except .....

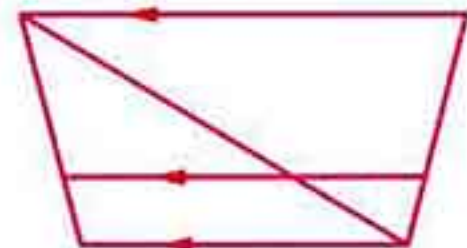
( age or weight or the favourite colour or tallness )

[c] If  $a : b = 2 : 3$ ,  $b : c = 3 : 5$ , then  $a : c = \dots\dots\dots$

( 8 : 15 or 2 : 5 or 4 : 9 or 3 : 10 )

[d] In the opposite figure :

The number of trapezoids  
is .....



( 3 or 4 or 2 or 5 )

3 [a] The ratio between the length of a rectangle to its width equals 7 : 4, its perimeter is 44 metres. Find the length and the width of the rectangle and calculate its area.

[b] A tank in the shape of a cuboid of dimensions 7 m. , 5 m. and 9 m. What is the volume of water which fills its third ?

4 [a] Two machines for the manufacture of cloth , the first produces 500 metres of cloth in two hours and the second produces 600 metres of cloth in 2 hours and half.

Which of the two machines is more efficient ?

[b] A company for electrical appliances displays the TV set for 1 026 pounds. If the company sold it with profit percentage is 14 % Find the buying price for the TV set.

5 [a] A cube of clay of edge length 8 cm. Cubes of edge length of each = 2 cm. are made of it. Find the number of these cubes.

[b] The following table shows the age of visitors to an exhibition within an hour of the day :

Visitor's age	10 –	20 –	30 –	40 –	50 –	Total
Number of visitors	6	9	12	10	8	45

(1) What is the number of visitors whose ages are less than 40 years ?

(2) Draw the frequency curve for this distribution.



## 4 El-Kalyoubia Governorate (2016)



Answer the following questions :

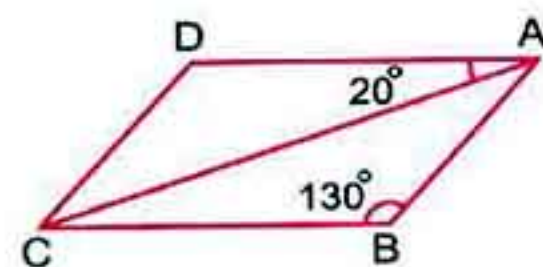
## 1 Complete the following :

- [a] The ratio between 18 kirats and  $1\frac{1}{2}$  feddans = ..... : .....
- [b] If the marks of 4 pupils in a maths test are 22 , 39 , 62 , 54 , then the range of the marks = .....
- [c] If 2 , x , 8 , 20 are proportional , then x = .....
- [d] The drawing scale = .....

## 2 Choose the correct answer :

## [a] In the opposite figure :

ABCD is parallelogram  
 , then  $m(\angle BAC) = \dots\dots\dots$



- (  $50^\circ$  or  $20^\circ$  or  $30^\circ$  or  $120^\circ$  )
- [b]  $\frac{3}{4}$  litre = ..... ( 75 mL. or  $7.5 \text{ dm}^3$  or  $750 \text{ cm}^3$  or  $0.075 \text{ cm}^3$  )
- [c]  $0.12 = \dots\dots\dots\%$  ( 1.2 or 12 or 0.12 or 120 )
- [d] From the quantitative data is the .....  
 ( favorite colour or birth place or blood type or age )

## 3 [a] A car covers 240 km. in three hours. Find the rate of the speed of the car.

- [b] If a man deposited L.E. 20 000 in a bank with an annual interest 8 %  
 Find the total amount he gets at the end of one year.

## 4 [a] A magnified picture of an insect was taken with a drawing scale 200 : 1 , if its real length is 1.2 mm. find its length in the picture.

- [b] A box in the shape of a cuboid with dimensions 30 cm. , 25 cm. and 15 cm. , if it is filled with cuboid shaped pieces of sweets of dimensions 6 cm. , 5 cm. , 3 cm. Find the number of pieces of sweets.

5 [a] The ratio between the lengths of the sides of a triangle is 2 : 3 : 4 , if the perimeter of the triangle is 108 cm.  
 Find the length of each side of the triangle.



## Final Examinations

[b] The following table shows the marks of 100 pupils in a maths exam :

The sets	10 –	20 –	30 –	40 –	50 – 60	Total
The frequency	15	25	30	20	10	100

Represent the previous data by the frequency curve.

## 5 El-Sharkia Governorate (2016)



Answer the following questions :

1 Choose the correct answer :

[a]  $1 - (35\% + 25\%) = \dots\dots\dots$

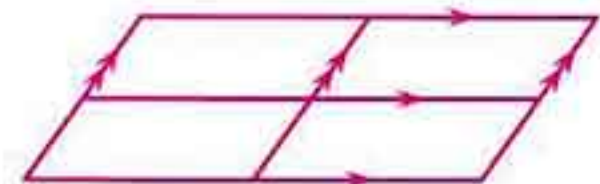
(  $\frac{1}{2}$  or  $\frac{1}{3}$  or  $\frac{2}{5}$  or  $\frac{3}{4}$  )

[b]  $2 \text{ m}^3 = \dots\dots\dots \text{ dm}^3$

( 2 or 20 or 200 or 2 000 )

[c] In the opposite figure :

The number of parallelograms  
is .....



( 9 or 7 or 5 or 4 )

[d] The opposite data are descriptive except .....

( blood species or the weight or the birth place or the social case )

2 Complete the following :

[a] The ratio between 2 kilograms and 1 500 grams in the simplest form is ..... : .....

[b] If  $\frac{x}{3} = 9\%$  , then  $x = \dots\dots\dots$

[c] In a parallelogram , the sum of the measures of any two consecutive angles = .....

[d] If the values of a frequency distribution lie between (20 , 60)  
 , then the range of this distribution = .....

3 [a] If the ratio among the measurements of the angles of a triangle is 1 : 2 : 3 Find the measure for each angle and mention the type of this triangle according to the measures of its angles.

[b] If the length of the Suez Canal on a map of drawing scale 1 : 1 100 000 is 15 cm. Find its real length in kilometres.



- 4 [a] A company sells a computer set for L.E. 2 688 , if the percentage of the profit is 12 % Find the company's buying price of a computer set.

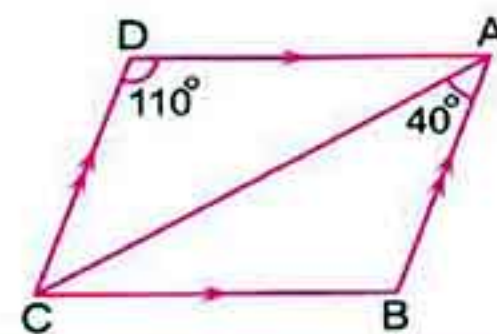
[b] In the opposite figure :

ABCD is parallelogram where

$$m(\angle D) = 110^\circ$$

$$, m(\angle BAC) = 40^\circ$$

Find :  $m(\angle B)$  ,  $m(\angle DAC)$



- 5 [a] A case in the shape of a cuboid , its base is a square shaped of side length 6 cm. and its height is 15 cm. Calculate its volume.

[b] The following table shows the marks of 100 pupils in one month in maths :

Marks	20 –	30 –	40 –	50 –	Sum
Number of pupils	15	30	40	15	100

Draw the frequency curve for this distribution.

ذاكرولى  
RaNia SaYed



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## Guide Answers of Final Examinations



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### Answers of final examinations

#### Answers of model examinations of the school book

##### Model 1

1 (1) 2.5 (2) 4 (3) 150 : 1

(4) The base length, the height

2 (1) 6 (2) 0.75 (3) 6 (4) 45°

3 [a] The volume of oil =  $12 \times 1000$

$$= 12000 \text{ cm}^3$$

$$\text{The number of bottles} = \frac{12000}{400}$$

$$= 30 \text{ bottles.}$$

[b] C.P. : Profit : S.P.

$$100\% : 12\% : 112\%$$

$$72000 : ?$$

$$\text{The selling price} = \frac{72000 \times 112\%}{100\%}$$

$$= \text{L.E. } 80640$$

4 [a] 1<sup>st</sup> angle : 2<sup>nd</sup> angle : 3<sup>rd</sup> angle : Sum

$$2 : 3 : 4 : 9$$

$$? : ? : ? : 180^\circ$$

The measure of the first angle

$$= \frac{2 \times 180^\circ}{9} = 40^\circ$$

The measure of the second angle

$$= \frac{3 \times 180^\circ}{9} = 60^\circ$$

The measure of the third angle

$$= \frac{4 \times 180^\circ}{9} = 80^\circ$$

[b] The volume of the cube =  $12 \times 12 \times 12$

$$= 1728 \text{ cm}^3$$

The volume of the an ingot =  $3 \times 4 \times 6$

$$= 72 \text{ cm}^3$$

The number of ingots =  $1728 \div 72$

$$= 24 \text{ ingots.}$$

5 [a] 1<sup>st</sup> person : 2<sup>nd</sup> person : Sum

$$5000 : 8000 : (+1000)$$

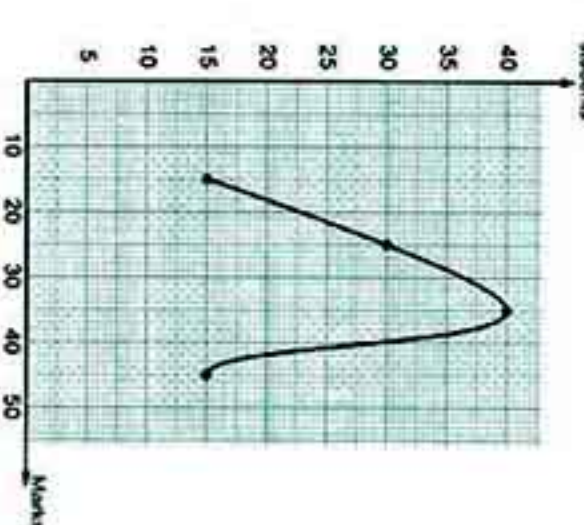
$$5 : 8 : 13$$

$$? : ? : 3900$$

The share of the first person  
 $= \frac{5 \times 3900}{13} = 1500 \text{ pounds.}$

The share of the second person  
 $= \frac{8 \times 3900}{13} = 2400 \text{ pounds.}$

[b]



##### Model 2

1 (1) rectangle (2)  $4\frac{4}{5}$  (3) 28 (4) 20

2 (1) 65 (2) 271 (3) 40 (4) 1 : 120

3 [a] 1<sup>st</sup> person : 2<sup>nd</sup> person : 3<sup>rd</sup> person : Sum

$$15000 : 25000 : 20000 : (+1000)$$

$$15 : 25 : 20 : (+5)$$

$$3 : 5 : 4 : 12$$

$$? : ? : ? : 5520$$

The profit share of the first person

$$= \frac{3 \times 5520}{12} = 1380 \text{ pounds.}$$

The profit share of the second person

$$= \frac{5 \times 5520}{12} = 2300 \text{ pounds.}$$

The profit share of the third person

$$= \frac{4 \times 5520}{12} = 1840 \text{ pounds.}$$

[b] The volume of the water =  $10 \times 1000$

$$= 10000 \text{ cm}^3$$

The base area of cuboid =  $25 \times 25$

$$= 625 \text{ cm}^2$$

The height of water =  $\frac{10000}{625} = 16 \text{ cm.}$



Answers of final examinations

1 [a] Boys : Girls : Sum

1 : 2 : 3

?

?

360

The number of boys =  $\frac{1 \times 360}{3}$

= 120 boys.

The number of girls =  $\frac{2 \times 360}{3}$

= 240 girls.

[b] m ( $\angle ADC$ ) =  $180^\circ - 70^\circ = 110^\circ$

, The perimeter of triangle BCD

=  $7 + 6 + 7.6 = 20.6$  cm.

5 [a] Price before discount : Discount : Price after discount

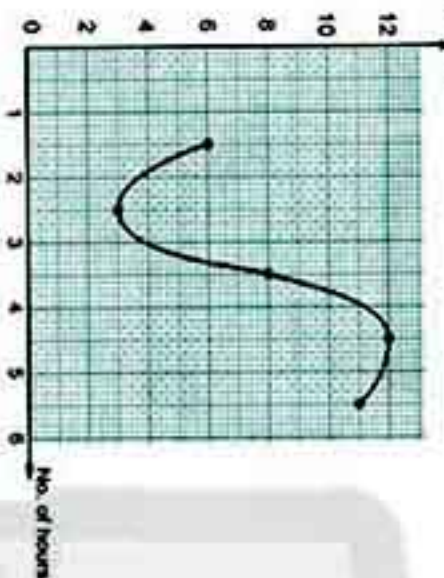
100 % : 15 % : 85 %

? : ? : 660

The price before discount =  $\frac{100 \% \times 660}{85 \%}$

$\approx 776$  pounds.

[b]



Model examination for the special needs students

1 (1) 5 : 8 (2) 30 (3) height (4) 3 000

2 (1) 30 (2) 15 (3) square (4) 1 : 100

3 (1) 12 (2) minimization (3) 1 : 4 (4) 90°

(3) 1 : 4

(4) 90°

4 (1) (✓) (2) (X) (3) (✓) (4) (X)

5 [a] (1) 2 : 5 (2) 100°

[b] (1) 6 (2) 14

Answers of Governorates Examinations for the Year 2017

1 Cairo (2017)

1 [a] 6 [b] 40

[c] rectangle + square [d] range

2 [a] 4 [b] age [c] 1.5 [d] 4

3 [a] Length in drawing : Length in reality

1 : 500 000

3 : ?

The red distance =  $\frac{3 \times 500\,000}{1}$

= 1 500 000 cm.

= 15 km.

[b] (1) The area of one face =  $54 + 6 = 9$  cm<sup>2</sup>

=  $(3 \times 3)$  cm<sup>2</sup>

The edge length = 3 cm.

(2) The volume =  $3 \times 3 \times 3 = 27$  cm<sup>3</sup>.

4 [a] 1<sup>st</sup> : 2<sup>nd</sup> : 3<sup>rd</sup> : Sum

5 : 4 : 3 : 12

? : ? : ? : 240

The number of pupils in 1<sup>st</sup> grade

=  $\frac{5 \times 240}{12} = 100$  pupils

The number of pupils in 2<sup>nd</sup> grade

=  $\frac{4 \times 240}{12} = 80$  pupils

The number of pupils in 3<sup>rd</sup> grade

=  $\frac{3 \times 240}{12} = 60$  pupils

[b] Price before discount : Discount : Price after discount

100 % : 15 % : 85 %

? : ? : 425

The original price =  $\frac{100 \times 425}{85}$

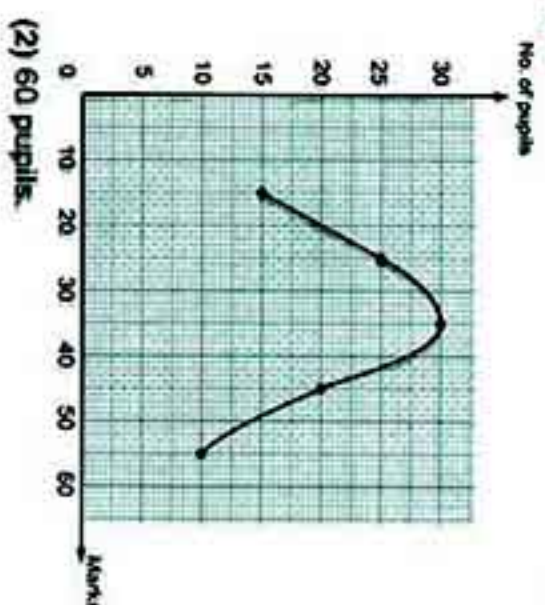
= L.E. 500

5 [a] (1) The length of  $\overline{CD}$  = 5 cm.

(2) m ( $\angle BAC$ ) = 40°

Answers of final examinations

[b] (1)



(2) 60 pupils.

2 Giza (2017)

1 [a] 70 % [b] 6

[c] rectangle + square [d] reduction

2 [a] 2 : 9 [b] 27

[c] 6 [d] favorite colour

3 [a] Length in drawing : Length in reality

1 : 1 100 000

15 : ?

The real length =  $\frac{15 \times 1\,100\,000}{1}$

= 16 500 000 cm.

= 165 km.

[b] The rate =  $\frac{20}{5} = 4$  litres/hr.

Advise by yourself.

4 [a] The capacity =  $40 \times 30 \times 1.8 = 2\,160$  m<sup>3</sup>

= 2 160 000 litres

[b] Girls : Boys : Sum

3 : 5 : 8

? : ? : 560

The number of girls =  $\frac{3 \times 560}{8}$

= 210 girls

The number of boys =  $\frac{5 \times 560}{8}$

= 350 boys

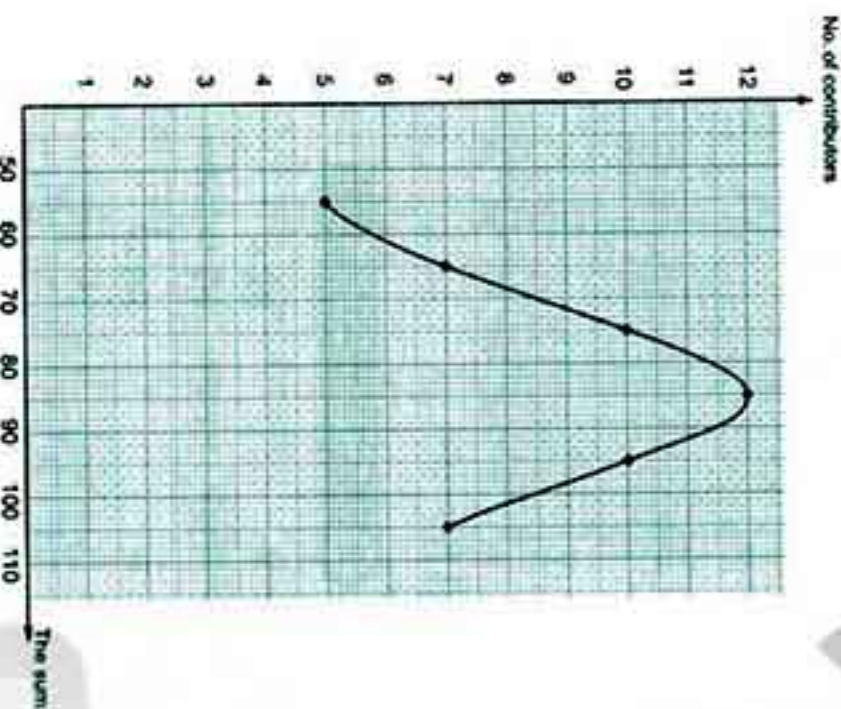


Answers of final examinations

5 [a] (1)  $m \angle D = 130^\circ$

(2)  $m \angle BAC = 25^\circ$

[b] (1)



(2) 29 contributors.

3 Alexandria (2017)

1 [a] 0.125

[b] 6

[c] 4.2

[d] favorite food

2 [a] 8

[b] 5 : 7

[c] 40

[d] square

3 [a] Boys

Girls

Sum

4

5

9

?

The number of pupils =  $\frac{16 \times 9}{4}$

= 36 pupils

[b] Length in drawing

Length in reality

1

40

160

The length in the picture =  $\frac{1 \times 160}{40} = 4$  cm.

72

1 [a] Buying price : Profit : Selling price

100 % : 15 % : 115 %

? : ? : 21 520

The buying price =  $\frac{100 \times 21\,520}{115}$

= L.E. 18 713  $\frac{1}{23}$

= L.E. 18 713

The profit =  $\frac{15 \times 21\,520}{115} = \text{L.E. } 2\,806 \frac{22}{23}$

= L.E. 2 807

[b] The volume of cube =  $12 \times 12 \times 12$

= 1 728  $\text{cm}^3$

The volume of an alloy =  $3 \times 4 \times 6$

= 72  $\text{cm}^3$

The number of alloys =  $\frac{1\,728}{72} = 24$  alloys

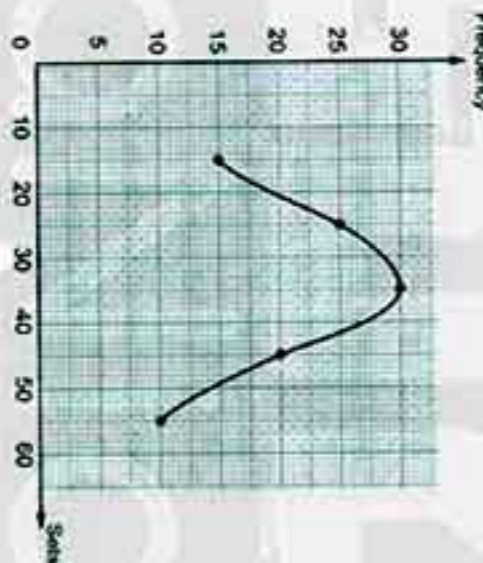
5 [a] (1) The capacity =  $30 \times 30 \times 30$

= 27 000  $\text{cm}^3$

= 27 litres

(2) The price =  $27 \times 9.5 = 256.5$  pounds

[b]



4 El-Kalyoubia (2017)

1 [a] 4 : 7 : 9

[b] 6

[c] 18 : 1

[d] diameter length  $\times \pi$

2 [a] 4

[b] 729

[c] 500

[d] 1 : 200

3 [a] Building : Tower

4 : 20

36 : ?

The height of the tower =  $\frac{20 \times 36}{4} = 180$  m.

[b] (1) Length in drawing : Length in reality

1 : 500

2 : ?

The first dimension in reality

=  $\frac{2 \times 500}{1} = 1\,000$  cm. = 10 m.

Length in drawing : Length in reality

1 : 500

The second dimension in reality

=  $\frac{4 \times 500}{1} = 2\,000$  cm. = 20 m.

(2) The real area of playground =  $10 \times 20$

= 200  $\text{m}^2$

4 [a] (1) DE : 4

(2) 3

(3) 12

[b] The capacity =  $40 \times 30 \times 1.8 = 2\,160$   $\text{m}^3$

= 2 160 000 litres

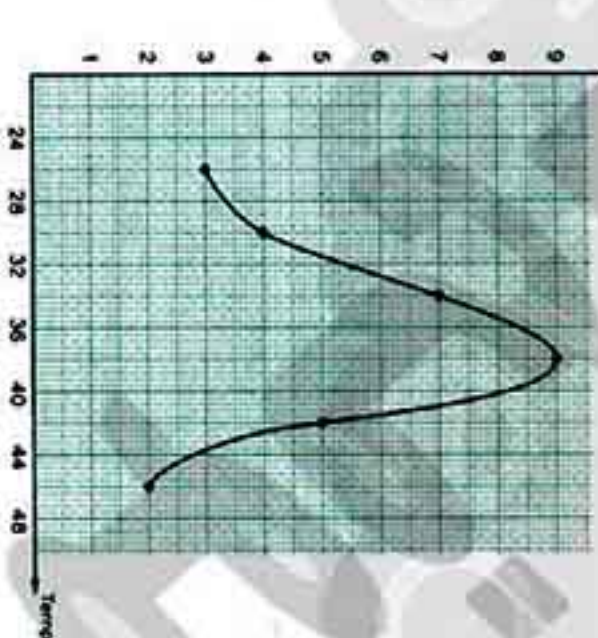
5 [a] A : C : Sum

2 : 3 : 5

? : ? : 90

The measure of  $\angle A = \frac{2 \times 90}{5} = 36^\circ$

The measure of  $\angle C = \frac{3 \times 90}{5} = 54^\circ$



5 El-Sharkia (2017)

1 [a] 2

[b] 28

[c] age

[d] 2

2 [a] 9

[b] 1 : 3

[c] 48

[d] 10

3 [a] The share of the first son

=  $\frac{1}{3} \times 6\,300 = 2\,100$  pounds.

The rest =  $6\,300 - 2\,100 = 4\,200$  pounds.

2<sup>nd</sup> son : 3<sup>rd</sup> son : Sum

3 : 2 : 5

? : ? : 4 200

The share of second son =  $\frac{3 \times 4\,200}{5}$

= 2 520 pounds.

The share of third son =  $\frac{2 \times 4\,200}{5}$

= 1 680 pounds.

[b] Length in drawing : Length in reality

1 : 9 000 000

? : 180 km.

The distance on the map

=  $\frac{1 \times 180 \times 100\,000}{9\,000\,000} = 2$  cm.

[a] Price before discount : Discount : Price after discount

100 % : 10 % : 90 %

? : ? : 4 500

The price before discount =  $\frac{100 \times 4\,500}{90}$

= L.E. 5 000

[b]  $m \angle ADC = 110^\circ$

The perimeter  $\Delta BCD = 8 + 6 + 4.1 + 4.1$

= 22.2 cm.

[c] [a] The edge length =  $132 + 12 = 11$  cm.

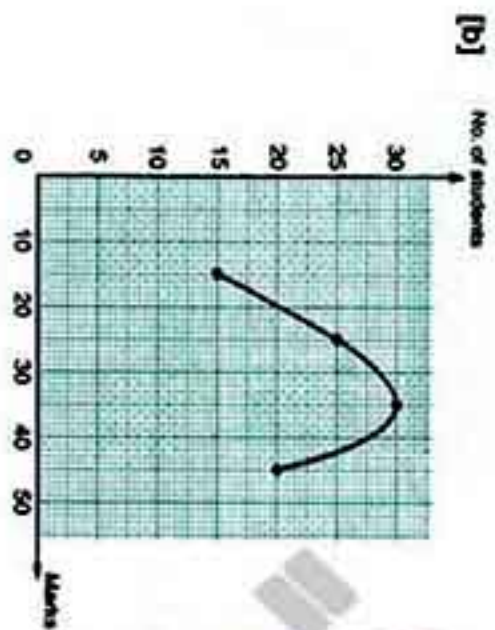
The volume =  $11 \times 11 \times 11 = 1\,331$   $\text{cm}^3$

73

Answers of final examinations



Answers of final examinations



6 El-Monofia (2017)

- 1 [a] 2.8 [b] 75  
[c]  $20 - X$  [d] the age

- 2 [a] 80 [b] 40  
[c] equilateral [d]  $60^\circ$

- 3 [a] Length in drawing : Length in reality  
1 : 1 000  
? : 50

The side length in drawing  
 $= \frac{1 \times 50 \times 100}{1000} = 5 \text{ cm.}$

The area in drawing  $= 5 \times 5 = 25 \text{ cm}^2$

[b] The cost  $= 49\,000 + 1\,000 = \text{L.E. } 50\,000$

The profit  $= 55\,000 - 50\,000 = \text{L.E. } 5\,000$

The percentage of profit  $= \frac{5\,000}{50\,000} \times 100\% = 10\%$

- 4 [a] The edge length  $= 36 + 12 = 3 \text{ cm.}$   
The volume  $= 3 \times 3 \times 3 = 27 \text{ cm}^3$

[b] Ahmed : Mohamed : Difference

7 : 4 : 3  
? : ? : 60

Ahmed's money  $= \frac{7 \times 60}{3} = \text{L.E. } 140$

Mohamed's money  $= \frac{4 \times 60}{3} = \text{L.E. } 80$

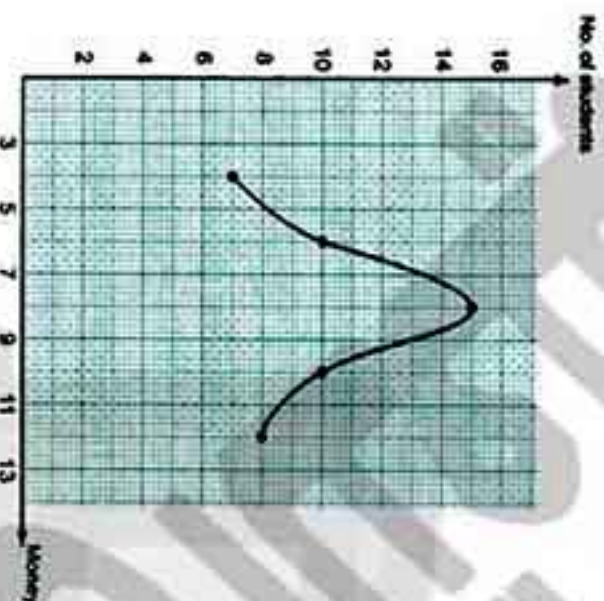
74

- 5 [a] The side length of the base  $= 20 + 4 = 5 \text{ cm.}$

The volume  $= 5 \times 5 \times 7 = 175 \text{ cm}^3$

[b] (1) 18 students.

(2)



7 El-Gharbia (2017)

- 1 [a]  $\frac{9}{5}$  [b] 27 [c] square [d] 8

- 2 [a] 70 [b] 10  
[c] 1 000 [d] blood type

- 3 [a] Ahmed : Omar : Sum  
9 : 13 : 22  
? : ? : 440

The money with Ahmed  $= \frac{9 \times 440}{22} = 180 \text{ pounds.}$

The money with Omar  $= \frac{13 \times 440}{22} = 260 \text{ pounds.}$

- [b] The height of water  $= \frac{10 \times 1\,000}{25 \times 25} = 16 \text{ cm.}$

- 4 [a] Price before discount : Discount : Price after discount  
100 % : 10 % : 90 %  
? : ? : 1 800

The original price  $= \frac{100 \times 1\,800}{90} = 2\,000 \text{ pounds.}$

Answers of final examinations

- [b] (1)  $m(\angle ABD) = 70^\circ$

(2)  $m(\angle ADC) = 115^\circ$

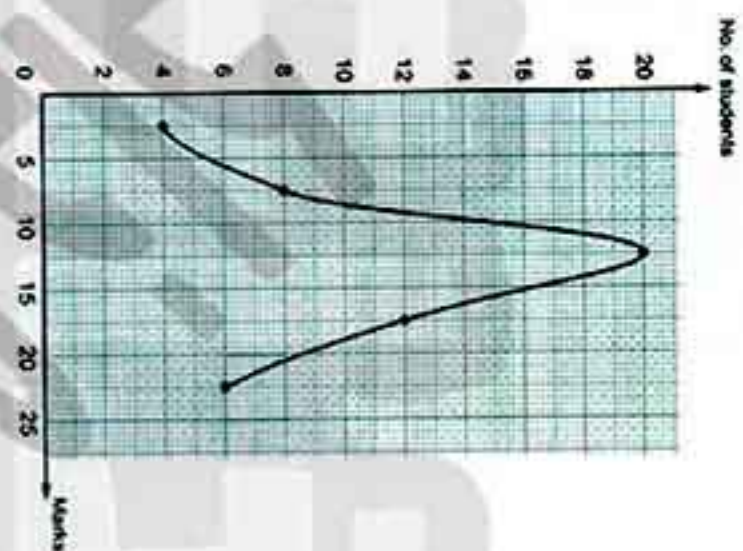
(3) The perimeter of  $\triangle ABD = 6 + 8 + 3.5 + 3.5 = 21 \text{ cm.}$

- 5 [a] Length in drawing : Length in reality

1 : 1 100 000  
15 : ?

The real length  $= \frac{15 \times 1\,100\,000}{1} = 16\,500\,000 \text{ cm.}$   
 $= 165 \text{ km.}$

[b] (1)



(2) 12 students.

8 El-Dakahlia (2017)

- 1 [a] The volume of the inner space of a hollow solid  
[b] 50 [c] 1 : 1 [d] 6

- 2 [a] age [b] 1000  $\text{cm}^3$   
[c] 2 [d] 3

- 3 [a] Length : Width : Perimeter  
7 : 4 : 22  
? : ? : 44

The length  $= \frac{7 \times 44}{22} = 14 \text{ cm.}$

The width  $= \frac{4 \times 44}{22} = 8 \text{ cm.}$

The area  $= 14 \times 8 = 112 \text{ cm}^2$

[b] The depth of the water  $= \frac{12 \times 1\,000}{20 \times 15} = 40 \text{ cm.}$

4 [a]

Height	45	?
Shadow length	24	8

The height of the tree  $= \frac{45 \times 8}{24} = 15 \text{ m.}$

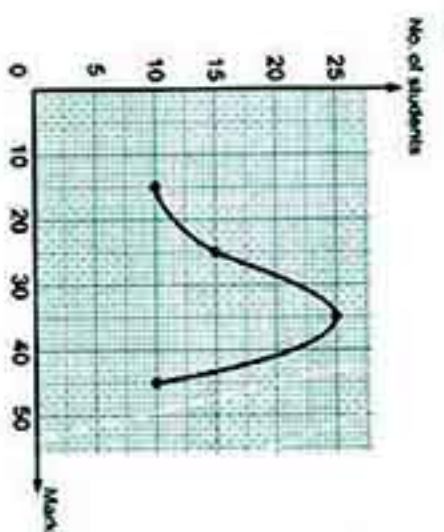
[b] (1)  $m(\angle D) = 100^\circ$

(2)  $m(\angle ACD) = 45^\circ$

(3) The perimeter of parallelogram  $= 6 + 5 + 6 + 5 = 22 \text{ cm.}$

5 [a] The percentage of the remainder  $= 100\% - 25\% = 75\%$   
 $\frac{60}{75} = \frac{100}{x}$   
The number of notebooks  $= \frac{100 \times 60}{75} = 80 \text{ notebooks}$

[b] (1)  $x = 30$   
(2)



9 Ismailia (2017)

- 1 [a] equal in length [b] 1 : 600

- [c] 15 [d] diameter length

- 2 [a] 3 [b] 6 [c]  $36 \text{ cm}^3$  [d] 18

75



Answers of final examinations

3 [a] The rate =  $\frac{45}{5} = 9$  L.E./day

[b] Buying price : profit : Selling price

100 % : 6 % : 106 %

The buying price =  $\frac{3180 \times 100}{106}$

= 3 000 pounds.

4 [a] The edge length =  $40 + 4 = 10$  cm.

The volume =  $10 \times 10 \times 10 = 1\,000$  cm<sup>3</sup>.

[b] 1<sup>st</sup> : 2<sup>nd</sup> : 3<sup>rd</sup> : Sum

50 000 : 40 000 : 30 000 : (+ 10 000)

5 : 4 : 3 : 12

The share of 1<sup>st</sup> person =  $\frac{5 \times 36\,000}{12}$

= 15 000 pounds

The share of 2<sup>nd</sup> person =  $\frac{4 \times 36\,000}{12}$

= 12 000 pounds

The share of 3<sup>rd</sup> person =  $\frac{3 \times 36\,000}{12}$

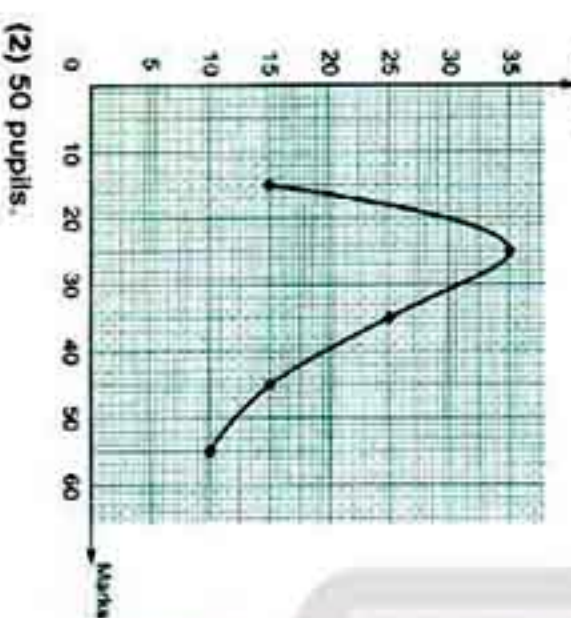
= 9 000 pounds

5 [a] (1) m (∠ CAB) = 40°

(2) m (∠ B) = 110°

[b] (1)

No. of pupils



(2) 50 pupils.

10 Suez (2017)

1 [a] 2 : 3 [b] 6

[c] 4 000 [d] rectangle + square

2 [a] 0.1 [b] L.E. 63 000

[c] 30 cm<sup>3</sup> [d] 6

3 [a] The rate =  $\frac{6}{3} = 2$  feddans/hr.

[b] 1<sup>st</sup> : 2<sup>nd</sup> : 3<sup>rd</sup> : Sum

3 : 4 : 2 : 9

6 : 8 : 12 : (+2)

3 : 4 : 6 : 13

The share of the 1<sup>st</sup> person =  $\frac{3 \times 6\,240}{13}$

= L.E. 1 440

The share of the 2<sup>nd</sup> person =  $\frac{4 \times 6\,240}{13}$

= L.E. 1 920

The share of the 3<sup>rd</sup> person =  $\frac{6 \times 6\,240}{13}$

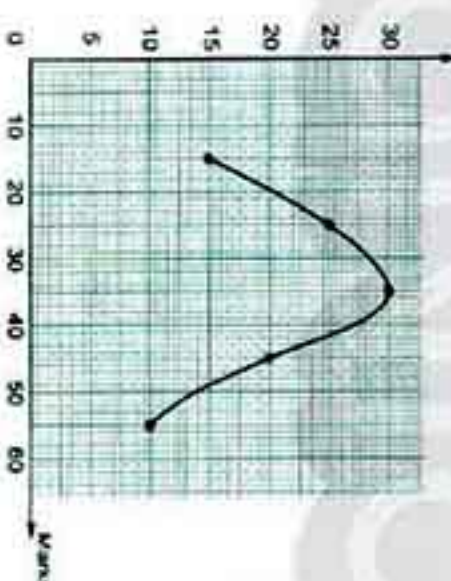
= L.E. 2 880

4 [a] The edge length =  $36 + 12 = 3$  cm.

The volume =  $3 \times 3 \times 3 = 27$  cm<sup>3</sup>.

[b]

No. of students



5 [a] Length in drawing : Length in reality

1 : 900 000

The distance on the map

=  $\frac{1 \times 180 \times 100\,000}{900\,000} = 20$  cm.

[b] (1) m (∠ ABC) = 110°

(2) AC = 12 cm.

(3) The perimeter of Δ ABC

= 6.5 + 8 + 12 = 26.5 cm.

11 Port Said (2017)

1 [a] 0.1 [b] the range [c] edge [d] 1 : 2

2 [a] € [b] 6.7

[c] the favorite colour [d] 90

3 [a] The rate =  $\frac{450}{5} = 90$  L.E./day

[b] The volume of cube =  $18 \times 18 \times 18$

= 5 832 cm<sup>3</sup>

The volume of one ingot =  $3 \times 6 \times 9$

= 162 cm<sup>3</sup>

The number of ingots =  $\frac{5\,832}{162} = 36$  ingots

4 [a] Buying price : Profit : Selling price

100 % : 15 % : 115 %

The buying price =  $\frac{100 \times 17\,250}{115}$

= L.E. 15 000

[b] BC = 4 cm, m (∠ D) = 115°

m (∠ ACD) = 40°

[c] Length in drawing : Length in reality

1 : 1 000 000

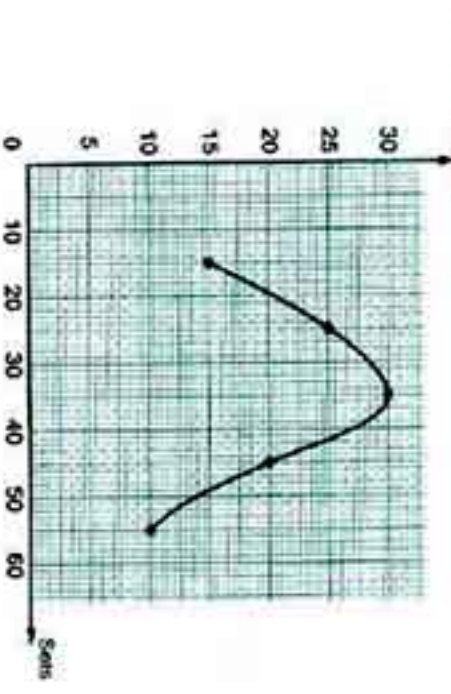
The real distance =  $\frac{9 \times 1\,000\,000}{1}$

= 9 000 000 cm.

= 90 km.

Answers of final examinations

[b] (1)



(2) 40 students.

12 Dameitta (2017)

1 [a] range [b] rectangle + square

[c] 12 [d] 27

2 [a] 6.5 [b] 1 : 1 000

[c] 1 : 6 [d] 4

3 [a] 1<sup>st</sup> building : 2<sup>nd</sup> building : Difference

4 : 7 : 3

The height of 1<sup>st</sup> building =  $\frac{4 \times 9}{3} = 12$  m.

The height of 2<sup>nd</sup> building =  $\frac{7 \times 9}{3} = 21$  m.

[b] The volume of water =  $\frac{1}{3} \times 7 \times 5 \times 9$

= 105 m<sup>3</sup>

4 [a] 1<sup>st</sup> : 2<sup>nd</sup> : 3<sup>rd</sup> : Sum

3 : 4 : 2 : 9

6 : 8 : 12 : (+2)

3 : 4 : 6 : 13

The share of 1<sup>st</sup> person =  $\frac{3 \times 6\,240}{13}$

= L.E. 1 440

The share of 2<sup>nd</sup> person =  $\frac{4 \times 6\,240}{13}$

= L.E. 1 920

The share of 3<sup>rd</sup> person =  $\frac{6 \times 6\,240}{13}$

= L.E. 2 880



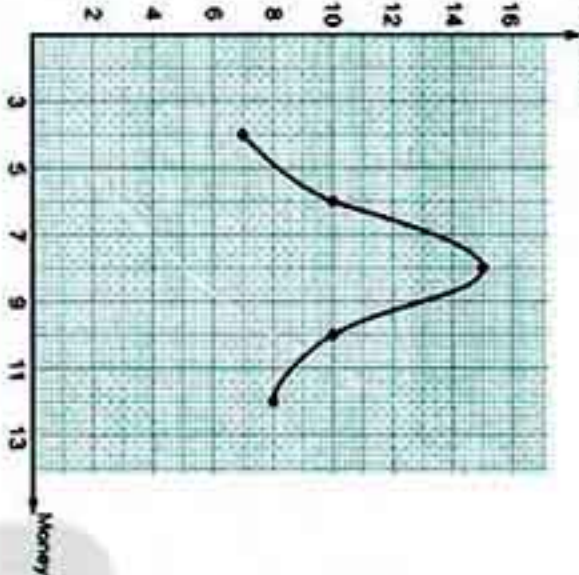
Answers of final examinations

[b] Price before discount : Discount : Price after discount  
100 % : 15 % : 85 %  
? : : 221  
The original price =  $\frac{100 \times 221}{85} = \text{L.E. } 260$

[c] [a] (1)  $m(\angle ABD) = 80^\circ$

(2) The perimeter for  $\triangle ACD$   
 $= 8 + 5.5 + 6 + 6 = 25.5 \text{ cm.}$

[b] (1)



(2) 18 students.

(13) Kafir El-Sheikh (2017)

[a]  $\frac{1}{2} \times$  The base length  $\times$  The height

[b] 729 [c] 9 : 8 [d] 3

[a] 6 [b] 20 : 1 [c] 4 600 [d] age

[a] Width : Length : Perimeter

3 : 4 : 14  
? : ? : 140

The width =  $\frac{3 \times 140}{4} = 30 \text{ cm.}$

The length =  $\frac{4 \times 140}{4} = 40 \text{ cm.}$

The area =  $30 \times 40 = 1200 \text{ cm}^2$

[b] C.P. : Profit : S.P.

100 % : 15 % : 115 %  
? : ? : 21 275

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The cost price =  $\frac{100 \times 21275}{115}$

= 18 500 pounds.

The profit =  $\frac{15 \times 21275}{115} = 2775 \text{ pounds.}$

[a] 1<sup>st</sup> brother : 2<sup>nd</sup> brother : Difference

7 : 5 : 2  
? : ? : 80

The share of 1<sup>st</sup> brother =  $\frac{7 \times 80}{2} = 280 \text{ m}^2$

The share of 2<sup>nd</sup> brother =  $\frac{5 \times 80}{2} = 200 \text{ m}^2$

The area of the land =  $280 + 200 = 480 \text{ m}^2$

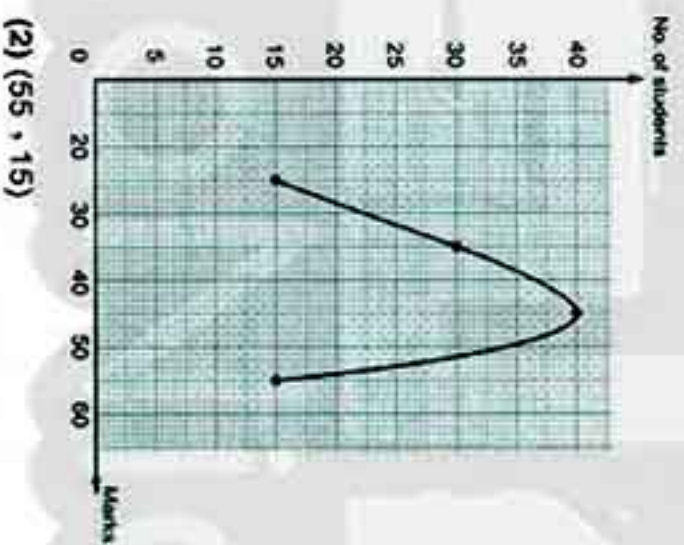
[b] (1)  $m(\angle ADC) = 110^\circ$

(2) The perimeter of  $\triangle BCD$

$= 7 + 6 + 3.8 + 3.8 = 20.6 \text{ cm.}$

[a] The height of water =  $\frac{405}{30 \times 15} = 0.9 \text{ m.}$

[b] (1)



(2) (55, 15)

(14) El-Beheira (2017)

[a] The volume [b] 30°

[c] Square and rhombus [d] the age

[a] 5 [b] 3 000 [c] 35 [d] 28

Answers of final examinations

[a] The rate of 1<sup>st</sup> machine =  $\frac{500}{2} = 250 \text{ m/hr.}$

The rate of 2<sup>nd</sup> machine =  $\frac{600}{2 \frac{1}{2}} = 240 \text{ m/hr.}$

The 1<sup>st</sup> machine is more efficient.

[b] Length in drawing : Length in reality

1 : 100 000  
? : 36 km.

The drawing distance between them

in this atlas =  $\frac{1 \times 36 \times 100\ 000}{100\ 000} = 36 \text{ cm.}$

[a] The rest =  $17 - 5 = 12 \text{ kirats}$

Son : Daughter : Sum

2 : 1 : 3  
? : ? : 12

The share of the son =  $\frac{2 \times 12}{3} = 8 \text{ kirats}$

The share of the daughter =  $\frac{1 \times 12}{3} = 4 \text{ kirats}$

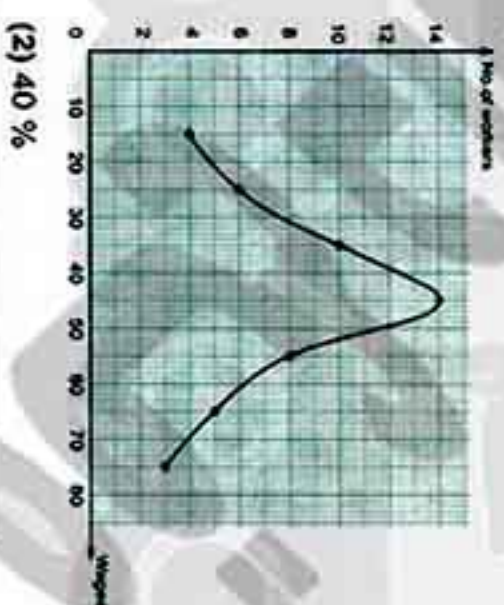
[b] The capacity =  $40 \times 30 \times 1.8$

$= 2160 \text{ m}^3 = 2160\ 000 \text{ L.}$

[a] The volume of metallic piece

$= 30 \times 30 \times 5 = 4500 \text{ cm}^3$

[b] (1)



(2) 40 %

(15) El-Fayoum (2017)

[a] 3 : 2 [b] 180 [c] 8 [d] 40

[a] 27 [b] {5}

[c] the birth place [d] 8

[a] Length in drawing : Length in reality

1 : 200 000  
8 : ?

The real distance =  $\frac{8 \times 200\ 000}{1}$

$= 1600\ 000 \text{ cm.}$

$= 16 \text{ km.}$

[b] Buying price : Profit : selling price

100% : 5% : 105%  
60 000 : : ?

The selling price =  $\frac{105 \times 60\ 000}{100}$

$= \text{L.E. } 63\ 000$

[a] Henry : Sherif : Khalid

3 : 5 : 7  
24 : ? : ?

The share of Sherif =  $\frac{5 \times 24}{3} = \text{L.E. } 40$

The share of Khalid =  $\frac{7 \times 24}{3} = \text{L.E. } 56$

[b] The volume of cube =  $12 \times 12 \times 12$

$= 1728 \text{ cm}^3$

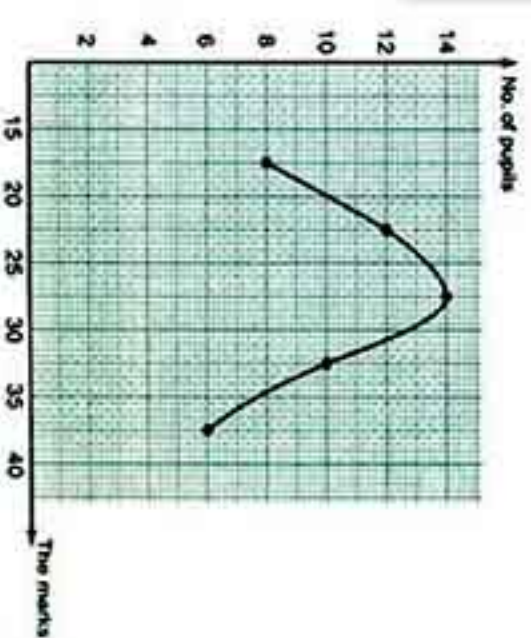
The volume of one alloy =  $3 \times 4 \times 6$

$= 72 \text{ cm}^3$

The number of alloys =  $\frac{1728}{72} = 24 \text{ alloys}$

[a]  $m(\angle B) = 110^\circ$ ,  $m(\angle DAC) = 30^\circ$

[b]



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هذا العمل حصري على موقع ذاكرولى التعليمى ويسمح بمشاركته فقط ولا يسمح بتداوله على الانترنت



Answers of final examinations

16 Beni Suef (2017)

1 [a] length × width

[b] 9

[c] 4 × 20

[d] 60

2 [a] 180°

[b] 1 : 4

[c] 10

[d] the age

3 [a] The rate =  $\frac{1000}{4} = 250$  cans/hr.

[b] Before interest : Interest : After interest  
100 % : 10 % : 110 %  
9 000 : : ?

The amount of money =  $\frac{110 \times 9000}{100}$   
= L.E. 9 900

4 [a] The edge length = 36 + 12 = 3 cm.

The volume = 3 × 3 × 3 = 27 cm<sup>3</sup>.

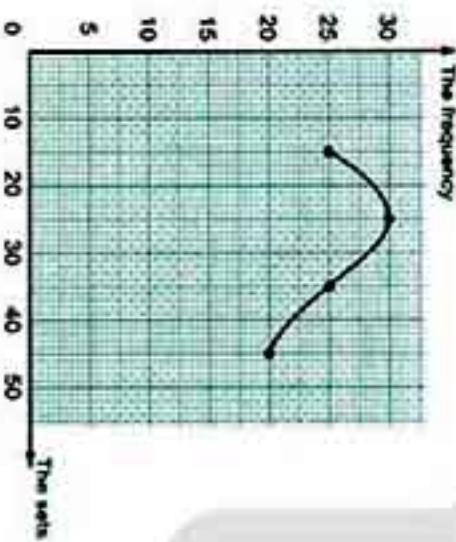
[b] Length in drawing : Length in reality  
1 : 200 000  
? : 48 km.

The distance in the atlas  
=  $\frac{1 \times 48 \times 100\,000}{200\,000} = 24$  cm.

5 [a] (1) m (∠ C) = 60°

(2) The perimeter of parallelogram ABCD  
= 5 + 3 + 5 + 3 = 16 cm.

[b]



17 El-Menia (2017)

1 [a] 1 : 3 [b] 8 [c] 30 [d] The age

2 [a] rhombus + square [b] 30

[c] 8

[d] 62.84

3 [a] Width : Length : Perimeter

3 : 4 : 14

? : ? : 70

The width =  $\frac{3 \times 70}{14} = 15$  cm.

The length =  $\frac{4 \times 70}{14} = 20$  cm.

The area = 15 × 20 = 300 cm<sup>2</sup>.

[b] Length in drawing : Length in reality

1 : 40  
? : 160

The height in the picture =  $\frac{1 \times 160}{40} = 4$  cm.

4 [a] C.P. : Profit : S.P.

100 % : 12 % : 112 %

60 000 : : ?

The selling price =  $\frac{112 \times 60\,000}{100}$   
= 67 200 pounds.

[b] The volume of big cube = 15 × 15 × 15

= 3 375 cm<sup>3</sup>.

The volume of small cube = 3 × 3 × 3

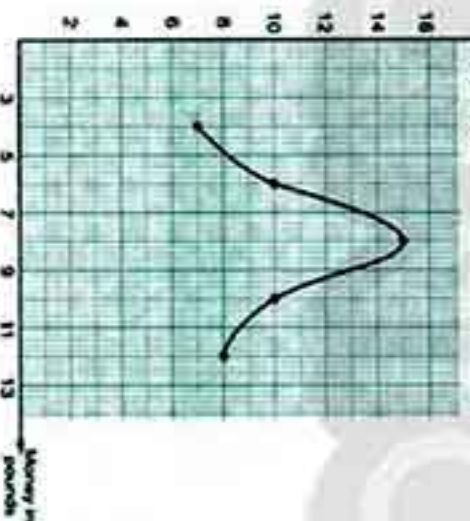
= 27 cm<sup>3</sup>.

The number of small cubes  
=  $\frac{3\,375}{27} = 125$  cubes.

5 [a] The volume of juice = 6 × 6 × 15 = 540 cm<sup>3</sup>.

[b] (1) 33 students.

(2)



18 Assiut (2017)

1 [a] 28 [b] 6 [c] age [d] 3 : 8

2 [a] 2 [b] square [c] 4 [d] 6

3 [a] 1<sup>st</sup> piece : 2<sup>nd</sup> piece : Sum

5 : 9 : 14

? : ? : 126

The length of 1<sup>st</sup> piece =  $\frac{5 \times 126}{14} = 45$  m.

The length of 2<sup>nd</sup> piece =  $\frac{9 \times 126}{14} = 81$  m.

[b] Length in drawing : Length in reality

1 : 100  
? : 18 m.

The length in the picture =  $\frac{1 \times 18 \times 100}{100} = 18$  cm.

4 [a] (1) The height of water =  $\frac{405}{30 \times 15} = 0.9$  m.

(2) The height of the empty part

= 2 - 0.9 = 1.1 m.

The volume of needed water

= 30 × 15 × 1.1 = 495 m<sup>3</sup>.

[b] (1) m (∠ ADC) = 130°

(2) The perimeter of Δ BCD

= 8 + 5 + 6 = 19 cm.

5 [a] 1<sup>st</sup> brother : 2<sup>nd</sup> brother : Difference

7 : 5 : 2

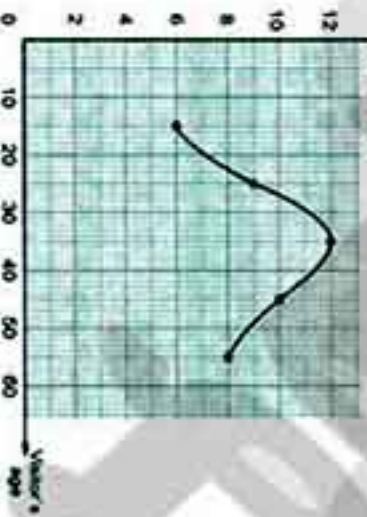
? : ? : 80

The share of 1<sup>st</sup> brother =  $\frac{7 \times 80}{2} = 280$  m<sup>2</sup>.

The share of 2<sup>nd</sup> brother =  $\frac{5 \times 80}{2} = 200$  m<sup>2</sup>.

The area of the land = 280 + 200 = 480 m<sup>2</sup>.

[b]



19 Souhag (2017)

1 [a] rectangle + square [b] 1 : 3

[c] 6 [d] 40

2 [a] 2 π r [b] The age [c]  $\frac{1}{4}$  [d] 9

3 [a] Length in drawing : Length in reality

1 : 500 000

3 : ?

The real distance =  $\frac{3 \times 500\,000}{1}$

= 1 500 000 cm.

[b] Hany : Sammy : Khaled : Sum

30 000 : 40 000 : 50 000 : (+ 10 000)

? : ? : ? : 6 000

The share of Hany =  $\frac{3 \times 6\,000}{12}$

= 1 500 pounds.

The share of Sammy =  $\frac{4 \times 6\,000}{12}$

= 2 000 pounds.

The share of Khaled =  $\frac{5 \times 6\,000}{12}$

= 2 500 pounds.

4 [a] The volume of cube = 9 × 9 × 9 = 729 cm<sup>3</sup>.

The volume one alloy = 3 × 3 × 1 = 9 cm<sup>3</sup>.

The number of alloys =  $\frac{729}{9} = 81$  alloys.

[b] Buying price : Profit : Selling price

100 % : 15 % : 115 %

? : ? : 23 000

The buying price =  $\frac{100 \times 23\,000}{115}$

= 20 000 pounds.

5 [a] (1) m (∠ ADC) = 110°

(2) The perimeter of Δ BCD

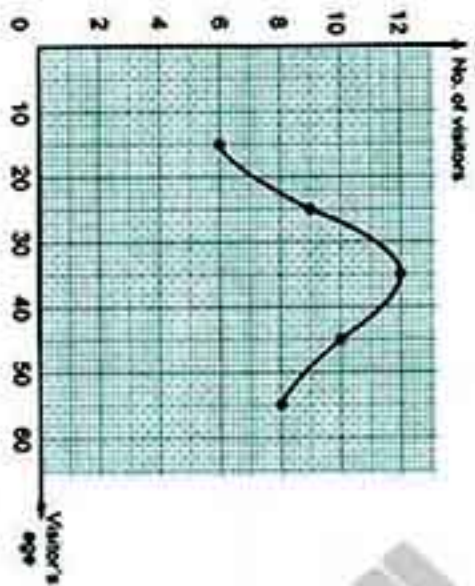
= 7 + 6 + 3.8 + 3.8 = 20.6 cm.



Answers of final examinations

[b] (1) 27 visitors.

(2)



20 Qena (2017)

[a] blood species [b] square

[c] 40 [d] 4 600

[a] 6 [b] 1 : 4 [c] 45 [d] 700 cm<sup>3</sup>

[a] The rate of 1<sup>st</sup> tractor =  $\frac{6}{3} = 2$  feddans/hr.

The rate of 2<sup>nd</sup> tractor =  $\frac{10}{4}$

= 2.5 feddans/hr.

The 2<sup>nd</sup> tractor is more efficiency.

[b] (1) The capacity of the cube =  $30 \times 30 \times 30$   
= 27 000 cm<sup>3</sup> = 27 litres

(2) The price of oil =  $27 \times 10$   
= 270 pounds.

[a] Length in drawing : Length in reality

1 : 1 000  
3 : ?

The real length =  $\frac{3 \times 1\,000}{1} = 3\,000$  cm.

= 30 m.

[b] The volume of cube =  $12 \times 12 \times 12$

= 1 728 cm<sup>3</sup>

The volume of one ingot =  $3 \times 4 \times 6$

= 72 cm<sup>3</sup>

The number of ingots =  $\frac{1\,728}{72} = 24$  ingots

[a] 1<sup>st</sup> brother : 2<sup>nd</sup> brother : Difference

7 : 5 : 2  
? : ? : 80

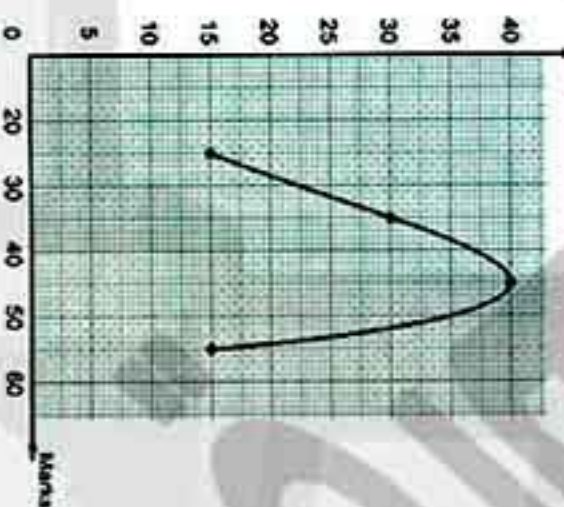
The share of 1<sup>st</sup> brother =  $\frac{7 \times 80}{2} = 280$  m<sup>2</sup>

The share of 2<sup>nd</sup> brother =  $\frac{5 \times 80}{2} = 200$  m<sup>2</sup>

The area of the land =  $280 + 200 = 480$  m<sup>2</sup>

[b] (1) 45 pupils.

(2)



21 Luxor (2017)

[a] 6 [b] 180° [c] 4 [d] 25 cm<sup>2</sup>

[a] 2 : 3 [b] the blood type [c] 3 000

[d] rhombus , square

[a] Buying price : Loss : Selling price

100 % : 5 % : 95 %  
150 000 : ? : ?

The selling price =  $\frac{95 \times 150\,000}{100}$

= L.E. 142 500

[b] Length in drawing : Length in reality

1 : 1 000  
3 : ?

The real height =  $\frac{3 \times 1\,000}{1} = 3\,000$  cm.

= 30 m.

[a] 1<sup>st</sup> road : 2<sup>nd</sup> road : Difference

2 : 5 : 3  
? : ? : 21

The length of 1<sup>st</sup> road =  $\frac{2 \times 21}{3} = 14$  km.

The length of 2<sup>nd</sup> road =  $\frac{5 \times 21}{3} = 35$  km.

[b] The volume of honey =  $20 \times 20 \times 20$

= 8 000 cm<sup>3</sup>

= 8 litres.

The price of honey =  $8 \times 8 = 64$  pounds.

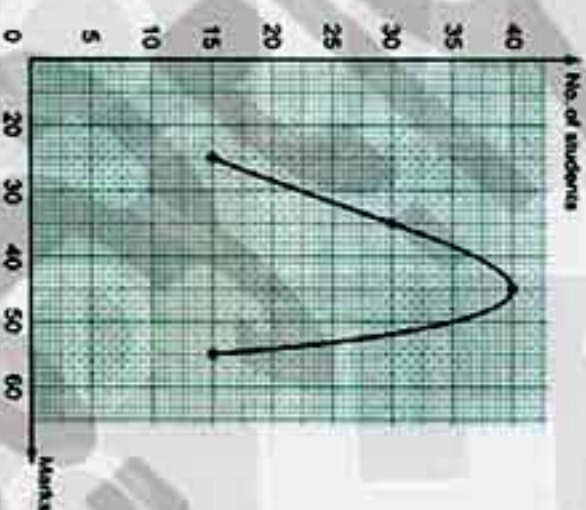
[a] The volume of cartoon box

=  $50 \times 40 \times 30 = 60\,000$  cm<sup>3</sup>

The volume of a tea box =  $10 \times 5 \times 6$   
= 300 cm<sup>3</sup>

The number of tea boxes =  $\frac{60\,000}{300}$   
= 200 boxes.

[b] (1)



(2) 45 students.

22 Aswan (2017)

[a] 0.5 [b] 1 : 5 [c] square

[d] the favourite colour

[a] 5 [b] 48.68 [c] 40 [d] 0.27

Answers of final examinations

[a] The profit =  $2\,640 - 2\,400 =$  L.E. 240

The percentage of profit

=  $\frac{240}{2\,400} \times 100\% = 10\%$

[b] The drawing scale =  $\frac{10}{120 \times 100\,000}$

= 1 : 1 200 000

[a] The volume =  $6 \times 6 \times 10 = 360$  cm<sup>3</sup>

[b] m ( $\angle D$ ) =  $118^\circ$ , m ( $\angle DAC$ ) =  $27^\circ$

[a] 1<sup>st</sup> angle : 2<sup>nd</sup> angle : 3<sup>rd</sup> angle

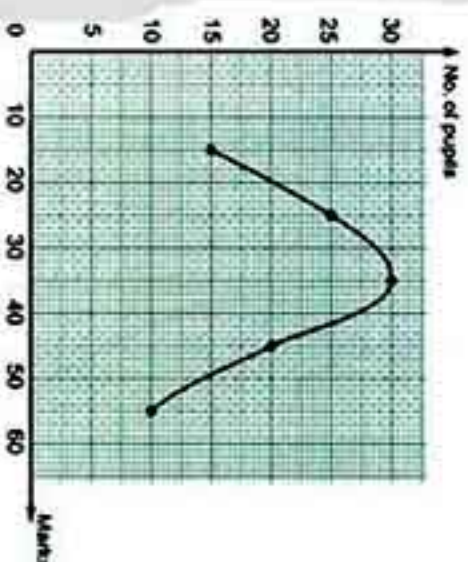
5 : 6 : 7  
50° : ? : ?

The measure of 2<sup>nd</sup> angle =  $\frac{6 \times 50^\circ}{5} = 60^\circ$

The measure of 3<sup>rd</sup> angle =  $\frac{7 \times 50^\circ}{5} = 70^\circ$

[b] (1) 60 pupils.

(2)



23 South Sinai (2017)

[a] 3 : 8 [b] rectangle , square

[c] the range [d] 2

[a] 6 [b] The age [c] 12 [d] 120

[a] The capacity of vessel

=  $30 \times 30 \times 30 = 27\,000$  cm<sup>3</sup>

= 27 litres.



Answers of final examinations

[b] Length in drawing : Length in reality

1 : 9 000 000  
? : 180 km.

The distance on the map

$$= \frac{1 \times 180 \times 100\,000}{9\,000\,000} = 2 \text{ cm.}$$

1 [a] Buying price : Profit : Selling price

100 % : 6 % : 106 %  
? : : 3 180

$$\text{The buying price} = \frac{100 \times 3\,180}{106} = \text{L.E. } 3\,000$$

[b] Boys : Girls : Sum

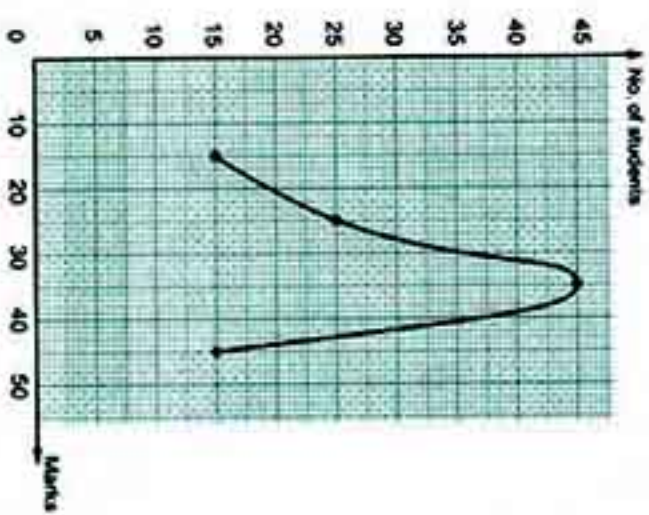
4 : 5 : 9  
? : ? : 540

$$\text{The number of boys} = \frac{4 \times 540}{9} = 240 \text{ boys}$$

$$\text{The number of girls} = \frac{5 \times 540}{9} = 300 \text{ girls}$$

5 [a] The volume of a cuboid =  $16 \times 9 = 144 \text{ cm}^3$

[b]



24 Red Sea (2017)

1 [a] 4.2 [b] 6 [c] 125 [d] The age

2 [a] rhombus + square [b] 20

[c] 500 [d] 6

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3 [a] 1<sup>st</sup> lorry : 2<sup>nd</sup> lorry

600 kg. : 1.5 ton  
"1.5 ton =  $1.5 \times 1\,000 = 1\,500 \text{ kg.}$ "

600 kg. : 1 500 kg.

600 : 1 500 (+ 100)  
6 : 15 (+ 3)  
2 : 5

[b] Length in drawing : Length in reality

1 : 1 100 000  
15 : ?

$$\text{The real length} = \frac{15 \times 1\,100\,000}{1} = 16\,500\,000 \text{ cm.}$$

$$= 165 \text{ km.}$$

1 [a] Buying price : Profit : Selling price

100 % : 10 % : 110 %  
? : : 2 200

$$\text{The buying price} = \frac{100 \times 2\,200}{110} = \text{L.E. } 2\,000$$

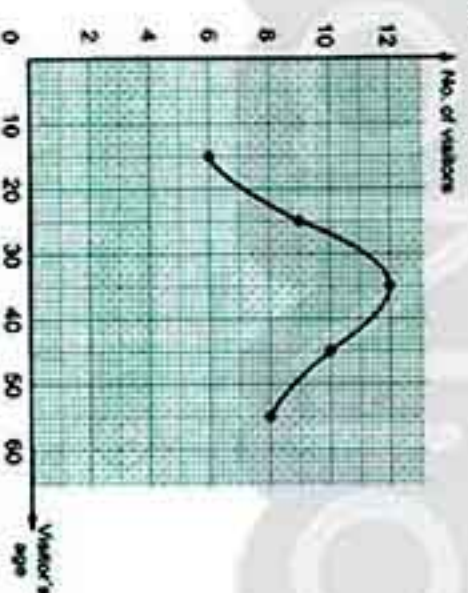
$$\text{The height} = \frac{4\,800}{240} = 20 \text{ cm.}$$

5 [a] (1)  $m(\angle D) = 120^\circ$

(2)  $m(\angle BAC) = 35^\circ$

(3)  $AD = 6 \text{ cm.}$

[b]



Answers of final examinations

5 [a] Length in drawing : Length in reality

1 : 500  
2 : ?

The first dimension in reality

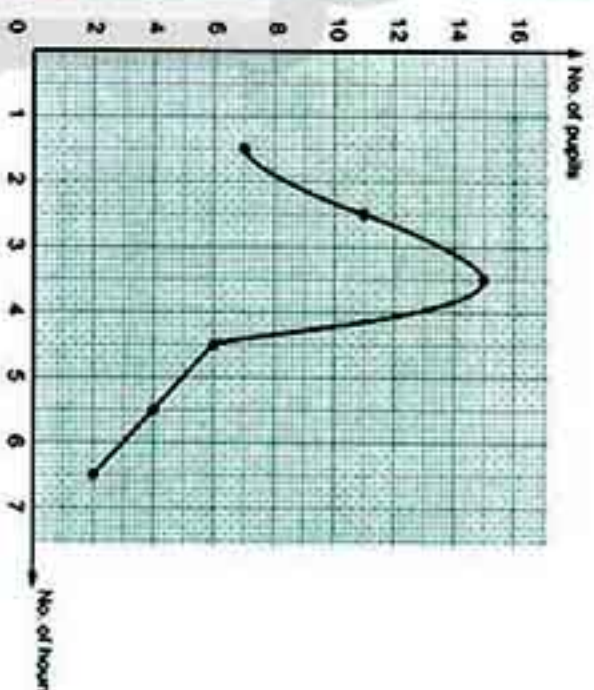
$$= \frac{2 \times 500}{1} = 1\,000 \text{ cm.} = 10 \text{ m.}$$

Length in drawing : Length in reality

1 : 500  
4 : ?

$$\text{The second dimension in reality} = \frac{4 \times 500}{1} = 2\,000 \text{ cm.} = 20 \text{ m.}$$

[b]



1 [a] The number of bottles =  $\frac{12 \times 1\,000}{400} = 30 \text{ bottles}$

[b] (1)  $m(\angle ABD) = 82^\circ$

(2)  $m(\angle D) = 127^\circ$

(3)  $AC = 12 \text{ cm.}$

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هذا العمل حصري على موقع ذاكرولى التعليمى ويسمح بمشاركته فقط ولا يسمح بتداوله على الانترنت



Answers of final examinations

Answers of Governorates Examinations for the Year 2016

1 Cairo (2016)

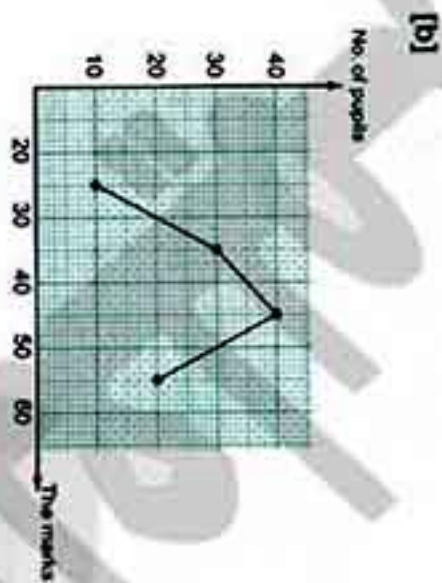
- 1 [a] 1 : 2 [b] 75 [c] 4 [d] 62°  
2 [a] 12 [b] nationality [c] 2 [d] 90  
3 [a] Length in drawing : Length in reality

$$\frac{1}{15} : \frac{1}{100000} = \frac{1}{16500000} \text{ cm.}$$

[b] 1<sup>st</sup> : 2<sup>nd</sup> : 3<sup>rd</sup> : Sum  
60 000 : 80 000 : 90 000 : (+ 10 000)  
6 : 8 : 9 : 23  
? : ? : ? : 20 700  
The share of the 1<sup>st</sup> person  
 $= \frac{6 \times 20700}{23} = \text{L.E. } 5400$   
The share of the 2<sup>nd</sup> person  
 $= \frac{8 \times 20700}{23} = \text{L.E. } 7200$   
The share of the 3<sup>rd</sup> person  
 $= \frac{9 \times 20700}{23} = \text{L.E. } 8100$

1 [a] The profit = 130 000 - 100 000 = L.E. 30 000  
The percentage of profit  
 $= \frac{30000}{100000} \times 100\% = 30\%$   
[b] (1) 120°  
(2) The perimeter of  $\Delta XLZ$   
 $= 3 + 5 + 7 = 15 \text{ cm.}$

5 [a] The number of bottles =  $\frac{12 \times 1000}{400} = 30$  bottles.

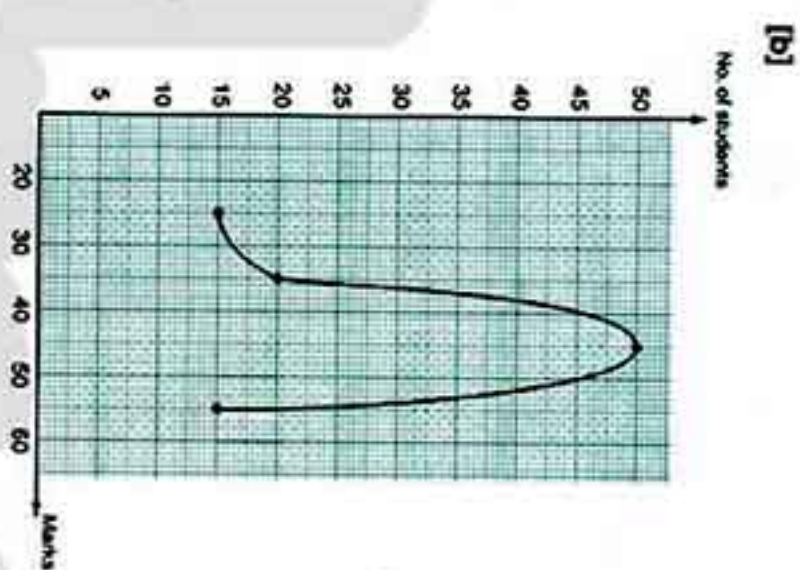


2 Giza (2016)

- 1 [a] 18 [b] 27 [c] 1 : 4 [d] 6  
2 [a] 750 [b] 8 [c] age [d] rectangle  
3 [a] The volume =  $12 \times 10 \times 8 = 960 \text{ cm}^3$

[b] Buying price : Profit : Selling price  
100% : 15% : 115%  
? : ? : 21 520  
The buying price =  $\frac{100 \times 21520}{115} = \text{L.E. } 18713 \frac{1}{23}$   
The profit =  $\frac{15 \times 21520}{115} = \text{L.E. } 2806 \frac{22}{23}$

1 [a] The drawing scale =  $\frac{10 \times 10}{2} = 50 : 1$   
[b] 1<sup>st</sup> : 2<sup>nd</sup> : 3<sup>rd</sup> : Sum  
2 : 3 : 5 : 10  
8 : 12 : 15 : 35  
? : ? : ? : 280  
The share of the 1<sup>st</sup> merchant  
 $= \frac{8 \times 280}{35} = 64 \text{ kg.}$   
The share of the 2<sup>nd</sup> merchant  
 $= \frac{12 \times 280}{35} = 96 \text{ kg.}$   
The share of the 3<sup>rd</sup> merchant  
 $= \frac{15 \times 280}{35} = 120 \text{ kg.}$   
5 [a] (1) 60° (2) 120°  
(3) The perimeter of the parallelogram  
ABCD =  $5 + 7 + 5 + 7 = 24 \text{ cm.}$



3 Alexandria (2016)

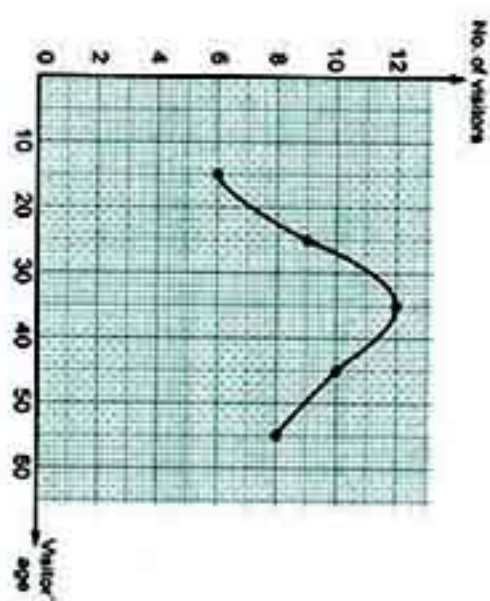
- 1 [a] 220 : 12 [b] 50 [c] 4 630 [d] number of sets  
2 [a] 5 [b] the favourite colour [c] 2 : 5 [d] 5  
3 [a] Length : Width : Perimeter  
7 : 4 : 22  
? : ? : 44

[a] Length : Width : Perimeter  
7 : 4 : 22  
? : ? : 44  
Length =  $\frac{7 \times 44}{22} = 14 \text{ m.}$   
Width =  $\frac{4 \times 44}{22} = 8 \text{ m.}$   
The area of rectangle =  $14 \times 8 = 112 \text{ m}^2$   
[b] The volume =  $\frac{1}{3} \times 7 \times 5 \times 9 = 105 \text{ m}^3$   
1 [a] The rate of 1<sup>st</sup> machine =  $\frac{500}{2} = 250 \text{ m./hr.}$   
The rate of 2<sup>nd</sup> machine =  $\frac{600}{2.5} = 240 \text{ m./hr.}$   
The first machine is more efficient than the second machine.

Answers of final examinations

[b] Buying price : Profit : Selling price  
100% : 14% : 114%  
? : ? : 1 026  
The buying price =  $\frac{100 \times 1026}{114} = 900$  pounds.

5 [a] The volume of the big cube =  $8 \times 8 \times 8 = 512 \text{ cm}^3$   
The volume of a small cube =  $2 \times 2 \times 2 = 8 \text{ cm}^3$   
The number of small cubes =  $\frac{512}{8} = 64$  cubes.  
[b] (1) 27 visitors. (2)



4 El-Kalyoubia (2016)

1 [a] 1 : 2 [b] 40 [c] 5 [d] length in drawing length in reality  
2 [a] 30° [b] 750 cm<sup>3</sup> [c] 12 [d] age  
3 [a] The rate =  $\frac{240}{3} = 80 \text{ km./hr.}$   
[b] Before interest : Interest : After interest  
100% : 8% : 108%  
20 000 : ? : ?  
The total amount =  $\frac{108 \times 20000}{100} = \text{L.E. } 21600$

هذا العمل حصري على موقع ذاكرولى التعليمى ويسمح بمشاركته فقط ولا يسمح بتداوله على الانترنت



Answers of final examinations

1 [a] Length in drawing : Length reality

200 : 1  
? : 1.2

The length in the picture =  $\frac{200 \times 1.2}{1}$   
= 240 mm,  
= 24 cm.

[b] The volume of the box

$$= 30 \times 25 \times 15 = 11\,250 \text{ cm}^3$$

The volume of a piece of sweet  
=  $6 \times 5 \times 3 = 90 \text{ cm}^3$

The number of pieces of sweets  
=  $\frac{11\,250}{90} = 125$  pieces.

5 [a] 1<sup>st</sup> side : 2<sup>nd</sup> side : 3<sup>rd</sup> side : Sum

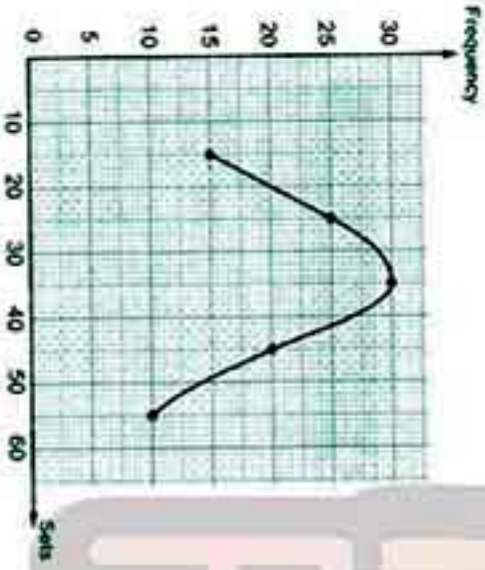
2 : 3 : 4 : 9  
? : ? : ? : 108

The length of 1<sup>st</sup> side =  $\frac{2 \times 108}{9} = 24 \text{ cm}$ .

The length of 2<sup>nd</sup> side =  $\frac{3 \times 108}{9} = 36 \text{ cm}$ .

The length of 3<sup>rd</sup> side =  $\frac{4 \times 108}{9} = 48 \text{ cm}$ .

[b]



5 El-Sharkia (2016)

1 [a]  $\frac{2}{3}$

[b] 2 000

[c] 9

[d] the weight

2 [a] 4 : 3 [b] 0.27 [c] 180° [d] 40

88

3 [a] 1<sup>st</sup> angle : 2<sup>nd</sup> angle : 3<sup>rd</sup> angle : Sum

1 : 2 : 3 : 6  
? : ? : ? : 180

The measure of 1<sup>st</sup> angle =  $\frac{1 \times 180}{6} = 30^\circ$

The measure of 2<sup>nd</sup> angle =  $\frac{2 \times 180}{6} = 60^\circ$

The measure of 3<sup>rd</sup> angle =  $\frac{3 \times 180}{6} = 90^\circ$

The triangle is a right-angled triangle.

[b] Length in drawing : Length in reality

1 : 1 100 000  
15 : ?

The real length =  $\frac{15 \times 1\,100\,000}{1}$   
= 16 500 000 cm = 165 km.

4 [a] Buying price : Profit : Selling price

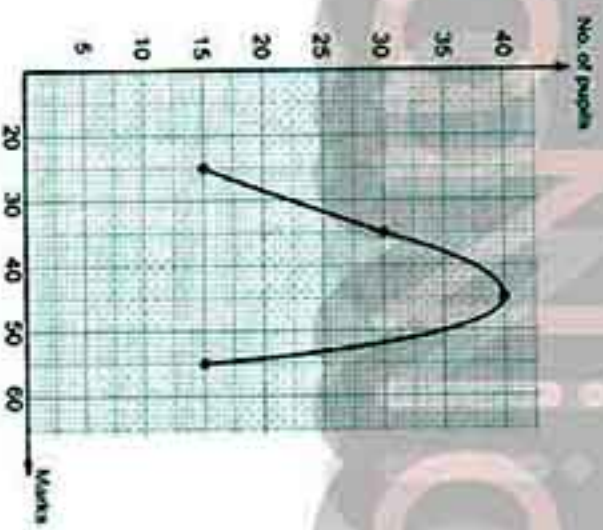
100 % : 12 % : 112 %  
? : ? : 2 688

The buying price =  $\frac{100 \times 2\,688}{112}$   
= L.E. 2 400

[b] m (∠ B) = 110°, m (∠ DAC) = 30°

5 [a] The volume =  $6 \times 6 \times 15 = 540 \text{ cm}^3$

[b]



تفوقك في أي مذكرة عليها العلامة دي  
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